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ABSTRACT

This report highlights key studies, salient findings, and the significance of research supported by the National Reading Research Center (NRRC), which was charged to conduct research on reading instruction appropriate for prekindergarten through 12th-grade learning environments. The first chapter of the report elaborates on a foundation principle of NRRC researchers--the "engagement perspective" which specifies the goal of reading instruction as developing motivated and strategic readers who use literacy for pleasure and learning. Chapters 2, 3, and 4 present key ideas contributed to or reinforced by the NRRC's 5-year research program. Chapter 2 addresses key ideas for preschool and elementary school reading, including: reading instruction should be systematic and integrated with quality children's literature; phonics should be taught explicitly within the context of authentic reading and writing activities; and literacy learning occurs both at school and home. Chapter 3 describes key ideas for middle school and high school reading, including: the use of multiple documents fosters students' interest in and learning of social studies content; a student-centered English curriculum motivates and promotes secondary students' literacy learning; and using analogies in science instruction aids students' learning and appreciation of science content. Chapter 4 presents key ideas for and about literacy teachers, such as: teachers who conduct research acquire personal insight about teaching and learning; and students serving as researches or informants provide insightful perspectives within the teacher-research process. Chapter 5 envisions what the NRRC legacy might be. Contains 196 notes. (RS)

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Engaged Reading for Pleasure and Learning:

A Report From the National Reading Research Center

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Engaged Reading for Pleasure and Learning:

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ExecutiveSummary

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The National Reading Research Center (NRRC) was funded from March 1992 through February 1997 by the Office of Educational Research and Improvement of the U.S. Department of Education. Operated by the University of Georgia and the University of Maryland College Park, the NRRC was charged to conduct research on reading instruction appropriate for prekindergarten through 12th-grade learning environments. NRRC researchers were guided by the *engagement perspective*, which specifies the goal of reading instruction as developing motivated and strategic readers who use literacy for pleasure and learning.

Drawing from prior research and theory, the NRRC was founded on several key ideas about teaching, learning, and research. These are outlined in the following section titled, "NRRC Foundation Principles," and they are elaborated on in Chapter 1 of this document.

[Key Ideas] are noted throughout the text to make pertinent sections easy to find

Building on these ideas across a 5-year research program, the NRRC has contributed to or reinforced a number of other key ideas that describe teaching and learning conditions or environments that produce engaged, lifelong readers. These are listed as sets of "What We Learned" key ideas for preschool and elementary school environments, middle and high school literacy instruction, and professional growth and learning for literacy teachers. These key ideas are elaborated on in Chapters 2, 3, and 4, respectively.

NRRC Foundation Principles: Key Ideas About Teaching, Learning, and Research

- Engaged readers are motivated, strategic, knowledgeable, and socially interactive.
- For reading research to have an impact on educational practice, it must occur where reading is learned and taught – in classrooms, schools, and homes.
- For reading research to be credible and result in change, teachers must participate as collaborative research partners.

What We Learned: Key Ideas for Preschool and Elementary School Reading

- Reading skills and strategies can be taught effectively and efficiently when instruction is systematic and integrated with quality children's literature.

- Phonics is *one* important component of a beginning reading program and should be taught explicitly within the context of authentic reading and writing activities.
- Motivation to read and reading ability are synergistic, mutually reinforcing phenomena.
- Literacy learning occurs both at school and home, and connections between home and school enhance children's learning in both environments.
- Thinking and talking about books promote children's critical understanding of what they read.

What We Learned:
Key Ideas for Middle School and High School Reading

- The use of multiple documents, as opposed to a single textbook, fosters students' interest in and learning of social-studies content.
- Using analogies between familiar ideas and unfamiliar science concepts aids students' learning and appreciation of science content.
- Parents are receptive and supportive of programs that help them promote their adolescents' reading for pleasure in out-of-school contexts such as community centers and public libraries.
- A student-centered English curriculum involving choices and connections to the world outside school motivates and promotes secondary students' literacy learning.
- Discussions about books in peer groups or among students across grade levels enhance students' involvement, interest, and learning in secondary content-area classrooms.

What We Learned:
Key Ideas For and About Literacy Teachers

- When teachers engage in the research process – by conducting their own studies or collaborating with school- or university-based colleagues – they acquire personal insight about teaching and learning, grow in professional knowledge and confidence, and affect instructional practices in positive ways.
- A self-directed community of teacher-researchers can produce powerful, pragmatic, influential inquiry that has local, regional, and national impact on the literacy profession.
- Students serving as researchers or informants provide insightful perspectives within the teacher-research process.

ChapterOne

An Engaging Beginning and Foundation

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Our overarching goal is to study how to cultivate highly engaged, self-determining readers who are the architects of their own learning ... readers [who] are motivated, knowledgeable, and socially interactive.[1]

This statement describes the engagement perspective, the conceptual cornerstone of the National Reading Research Center (NRRC), a consortium of the universities of Georgia and Maryland. The engagement perspective assumes that in order for children and adolescents to develop into fluent, adult readers, they need to acquire:

- a desire to read and use literacy (motivation),
- skills and abilities that allow readers to recognize print, understand it, and interact with it (strategies),
- information about reading and how to obtain ideas from the written word (knowledge),
- the ability to learn from and with others while using reading skills and abilities (social interaction).

When learners acquire and develop these complex proficiencies and learn to integrate them into the process of reading and responding to text, they demonstrate engaged reading.

The NRRC Mission

[Key Idea] Engaged readers are motivated, strategic, knowledgeable, and socially interactive.

The engagement perspective has guided the NRRC's work for 5 years, providing a structure for understanding and learning how prekindergarten through Grade 12 students acquire reading competencies and how teachers and others might teach and enable students to develop into proficient, motivated, lifelong readers. Working within the engagement perspective, the NRRC has sought to address four well-documented problems in U.S. reading research and education[2]:

1. Too many Americans lack the ability and desire to read and write.
2. There is a persistent lack of equity in reading achievement of mainstream and non-mainstream students.

3. In spite of advancements in our understanding of the reading process, reading instruction has advanced very little beyond the type of instruction provided students 30 years ago.
4. Research on reading has too frequently been conducted in carefully controlled "laboratory" situations, not within the real-life home, school, and community environments in which teaching and learning occur.

[Box 1–1. NRRC Research Objectives]

- Describe students' motivation to read at home and in school.
- Relate thinking processes during reading to social and motivation factors.
- Assess instruction in reading strategies on students' motivation and reading development.
- Learn about home-to-school bridges in young children's literacy learning.
- Explore how technology can enhance reading growth and development.
- Study how social interaction patterns affect thinking during reading for enjoyment and learning from textbooks.
- Evaluate literature-based programs for young children, particularly those struggling in reading development.
- Trace learning during reading in middle and secondary school science, math, geography, and history classes.
- Explore alternative forms of reading assessment and establish standards for teacher-based assessments.
- Create collaborative research arrangements with teachers and infuse them into the NRRC research agenda.

Driven by these problems, we at the NRRC have implemented scores of studies exploring how preschool, primary, elementary, middle, and high school students come to acquire reading proficiency, and how teachers might instruct students and create rich and supportive learning environments. Our research objectives have been many and varied [see Box 1–1]. Likewise, our research methods have included a full range of traditional and emerging approaches,[4] but our studies have always addressed the four problems on which the NRRC was founded, and our research has been unified by our desire to promote engaged reading at home and in school.[5]

Research on Engaged Reading

All of our research at the NRRC is tied to the notion of engaged reading – the motivated, strategic, knowledgeable, and socially interactive nature of mature readers. Our studies have examined how preschoolers, young children, and adolescent readers acquire and can be taught to foster the complex, interactive qualities of engaged reading.

Motivation

Key components of engaged reading are the desire to read books and other texts; the ability to understand and interpret the printed word; and the achievement of pleasure, fulfillment, and practical benefits as a result of the reading experience. We at the NRRC know that simply providing learners the *skill* to read and learn is not sufficient; students must also ultimately acquire the intrinsic *will* to

[Box 1–2. Motivating Research: Three Snapshots]

NRRC researchers have explored the engagement perspective in numerous studies, examples of which are included throughout this report. One particular dimension of reading engagement – students' motivation to read – has been a prominent theme in many studies. The following descriptions provide snapshots of how researchers have explored elementary, middle, and high school students' attitudes, interests, and desire to use literacy for learning and pleasure.

Elementary students' motivation for reading and writing. Linda Gambrell, Rose Marie Codling, Barbara Martin Palmer, and colleagues spent considerable time in third- and fifth-grade classrooms observing students, interviewing them, and asking them to complete surveys to ascertain what motivates or hinders their desire to read and write.[8] Regarding reading, the researchers found access to books through classroom and school libraries, receiving books as gifts, and membership in book clubs as critical to motivation. Giving the child a choice of reading materials, familiarity with authors and illustrators, and peer recommendations were linked to higher motivation. For example, one child related her book selection to a friend's suggestion: "My friend Kristin was reading it [book she selected] and told me about it, and I said, 'Hmmm, that sounds pretty interesting.'"

The research on students' writing was equally revealing. Students reported multiple values and purposes for writing, conveyed their perceptions of themselves as writers, described social influences on their writing, and had opinions about the effects of writing instruction. For example, a commonly stated reason for writing was to express personal feelings, as one fifth grader noted:

> *I think they [other students] write to enjoy themselves because you can express a lot of feelings or what you did that day. We just a read a book, Bridge to Terabithia, and there's a little part in the book that said that the author used her feelings to express this story, so I think you can really share your feelings with what you write or get a message across to people that you want them to know or do.*[9]

Not every student felt good about her or his writing ability ("I'm not terrific because I always do make mistakes," stated one child), but most expressed satisfaction with their writing ("Well, one story that I wrote yesterday. I really thought that it was really good because everybody liked it, what I wrote.").

Teacher influences also weighed heavily in students' self-perceptions and their motivations to read and write. One student

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exercise their developing reading proficiencies. Therefore, we have explored students' motivation in a number of studies, trying to understand what home, school, and community conditions promote students' desire to read, write, and use literacy for learning and personal fulfillment.[6] Our research has embraced multiple viewpoints on motivation for reading[7] and has examined motivation in home and preschool contexts as well as within elementary, middle, and high school environments [see Box 1–2].

Strategies

NRRC researchers have explored how to teach students reading and writing strategies effectively in varied formats and styles. In one strand of inquiry, several researchers have examined how the power of a literature-based reading instructional environment can be a springboard for teaching students to read words and comprehend connected text.[13] For example, Patti Bridwell demonstrated how she teaches decoding and meaning-seeking strategies through literature and literary experiences throughout the school day in her first-grade classroom. As Patti and her research colleagues stated, "Effective instruction in basic skills can not only exist but flourish in the context of a literature-based philosophy."[14]

Knowledge

Other NRRC researchers have explored how acquiring information, and the manner in which is it obtained, contributes or does not contribute to reading engagement.[15] For example, several research teams have explored how using multiple sources of historical information (e.g., original documents, fiction and nonfiction trade books) affect students' learning. Specifically, Bruce VanSledright examined

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how trade books influenced fifth graders learning about the English colonization of North America,[16] and Steven Stahl and colleagues explored high school students' understanding of a Vietnam War incident through multiple, original documents.[17] Students in these studies reported that these alternate, multiple texts were interesting and motivating to read (as opposed to the corresponding section in the social studies textbook), but observations and formal assessments revealed that these materials did not significantly enhance the quantity or quality of students' knowledge gained by reading them. It seems as though instruction is required in conjunction with these multiple texts in order for students to read them critically, learn from them effectively, and begin to think like historians.

Social Interaction

NRRC researchers have also examined the relationship between social interaction and engaged reading and writing. Learning to read and write in classrooms is frequently not a solitary task, but instead involves free and structured opportunities for students to work together, talk to one another, and learn with and from one another.[18] Anthony Pellegrini, Lee Galda, Betty Shockley-Bisplinghoff, and colleagues have studied kindergarteners' and first graders' social interactions in classrooms and their relationships to literacy learning. Results of these researchers' qualitative and quantitative studies have demonstrated that a carefully orchestrated classroom environment that enables and encourages children to talk and interact socially in multiple literacy-related events (e.g., storybook reading, reading and writing workshops, class sharing times) allows them opportunities to learn about language as they are using it for real, communicative purposes.[19] Further, these researchers have explored how children's friendships are mutually supportive in literacy learning and how teachers might capitalize on friend-related social interactions in classroom literacy activities.[20]

[Box 1–2 continued]

commented, "My first-grade teacher, she really inspired me on writing because she was a really good writer. We wrote original stories every single day in the morning, so she like gave us really good ideas, and whenever we did a really good job on it, she put it outside the classroom so everyone who passed by could see it." Linda and her colleagues learned that when teachers and researchers ask students about their motivations for literacy, the students are not only extremely candid but also provide useful ideas for creating motivating instructional programs.

The highs and lows of middle school motivation. Penny Oldfather, in collaboration with Sally Thomas, traced students' perceptions of their motivation for learning from their upper-elementary school years through the middle grades and into high school.[R] Students' motivation was high in their elementary years, due largely to a supportive, nurturing classroom environment created by their teacher, Sally Thomas. But when they entered middle school or junior high, some of their taken-for-granted classroom conditions and expectations changed, as then did their motivation. One key factor was the change from a student-centered climate in Sally's elementary classroom to a more teacher-centered environment in junior high. Whereas these students had experienced considerable responsibility and choices associated with their learning in elementary school, they now found fewer opportunities for choice and self-expression in the middle grades. In the report, Penny stated, "As they entered junior high school, these students' intrinsic engagement in literacy learning decreased. They focused less on the basic interest of reading and writing and became more concerned with grades and extrinsic rewards. How did these changes come about? The students believed that the key reason was that junior high no longer provided opportunities for self-expression." As Florencia, one of the junior high student researchers and informants, expressed, "In junior high, you are looking at the teacher more. They like to be in charge. They don't want people talking about things, or getting out of hand or whatever. They want to be the people up there and in charge. They would rather not have us in it so much." Although highly motivating and less motivating classroom environments can be found at all levels of education, Penny's observed general rise and fall of intrinsic motivation across the elementary school and middle-grade years suggests the need for a critical examining of teaching and learning environments and structures in middle-grade schools and classrooms.

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[Box 1–2 continued]

Motivation in a high school literacy lab For over 3 years, David O'Brien and Deborah Dillon have spent hundreds of hours in the Lafayette (Indiana) Jefferson High School literacy lab conducting research and teaching 9th- through 12th-grade students identified as "at risk" for literacy development.[8] Working collaboratively with Rebecca Springs and David Stith, Jefferson teachers assigned to the lab, they have created an innovative, technology-based program designed to foster student ownership and involvement, increase students' intrinsic motivation, and maximize the amount of time engaged with meaningful reading and writing tasks. The Jefferson research team has observed and reported positive student responses and increased achievement as a result of their program, as illustrated by the following:

> *Many of the at-risk learners with whom we work refuse to participate in teachers' agendas, but they willingly engage in literacy-lab lessons and activities that are important in their lives. For example, the at-risk students we work with are often reluctant to continue writing stories using writing prompts from teachers or introductions from other student authors. However, they enthusiastically write their own stories about topics they are concerned about within their lives and within their popular culture (e.g., gangs, school violence, teenage smoking, drugs, sex, music). They also write when we encourage them to write for their friends. Similarly, students who seldom read assigned texts willingly read letters or notes their peers leave them in their e-mail folders, because these letters and notes are about issues and people that interest them. Students who almost never read or write are now reading voraciously and taking notes to get a variety of information from CD-ROM murder mysteries that are unlike anything else they have read. These programs are also intriguing to students, because they contain some language that is against the rules of the typical school culture.*[9]

Field-Based Research

[Key Idea] For reading research to have an impact on educational practice, it must occur where reading is learned and taught – in classrooms, schools, and homes.

The NRRC has not been a center in which the research has been conducted predominately in laboratories or clinics – the "center" is not located on our university campuses in Athens, Georgia, or College Park, Maryland. Rather, the NRRC is located where the action is – in homes observing children's early literacy experiences and interacting with parents and caregivers; on the rugs in the corners of elementary classrooms exploring how children learn to pronounce words and develop the love of books and literature; in middle school classrooms where teachers implement reading and critical-thinking programs to challenge all students; in high school English, science, and social studies classrooms in which researchers and teachers explore ways to help young adults learn from their textbooks, trade books, and other printed resources.

NRRC research is not always uncomplicated; rather, it is made complex by the educational milieu in which teaching and learning occur. But the reading problems we face in American schools are not unidimensional, and therefore, the solutions are multifaceted and involve immersing ourselves in real literacy environments in homes, schools, and communities.

Teachers as Researchers

[Key Idea] For reading research to be credible and result in change, teachers must participate as collaborative research partners.

When we crafted our NRRC proposal, we made a commitment to school-based research [see Box 1–3]. Logic suggested that sensible, useful classroom-based research had to involve teachers. Therefore, teachers have been intimately involved with the conception, implementation, interpretation, and dissemination of NRRC research. Teachers have served as primary researchers on NRRC studies; they have collaborated among themselves and also with university-based researchers. If engagement is

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the warp of the NRRC research tapestry, then teachers are the weft that holds the weaving together and provides the rich color and texture to our collective inquiries.

Organization of This Report

In this report, we highlight key studies, salient findings, and the significance of NRRC-supported research. We structure our discussion in a manner that parallels the research agenda we have pursued. First, we explore how NRRC research has illuminated our understanding of the literacy learning of young children in home and at school. Second, we present what we have learned from studies that have examined adolescents' and young adults' use of reading skills and abilities to acquire information in middle and high school. Third, we describe NRRC-supported research that has involved teachers as full participants and has included the voices of students and parents. Finally, we look toward the future to envision what the NRRC legacy might be and what must follow our efforts.

[Box 1-3. Commitment to School-Based Research]

Our vision for the NRRC is based upon the belief that there should be a dynamic, reciprocal relationship between theory and practice -- that theory can inform practice and practice can enlighten theory. Therefore, NRRC activities will enlist teachers as collaborative researchers and establish permanent research sites where university- and school-based researchers plan, conduct, synthesize, and report research. When teachers engage in research, posing problems and examining their own work, there is inherently a bridge between theory and practice. Teacher inquiry develops ownership of the research questions, enhances the credibility of findings, and fosters dissemination.[2]

Chapter Two

Engaging Preschool and Elementary-Level Students to Learn to Read

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The immersion in literature and the embedded strategy instruction [in a second-grade classroom] created a kind of symbiotic, synergistic relationship in which ... the literature enhanced students' reading and writing fluency, and their developing literacy abilities promoted their literacy knowledge and appreciation.[1]

From the beginning, NRRC Research has contributed to our understanding about how to foster the reading engagement of students in prekindergarten through elementary school. It has done this by focusing on literature-based reading instructional programs that include skill and strategy instruction, home and school connections, and ways to help students think about and discuss literature.

Literature-Based Reading Instructional Programs

[Key Idea] Reading skills and strategies can be taught effectively and efficiently when instruction is systematic and integrated with quality children's literature.

Katherine Paterson, distinguished author of many children's books (e.g., *Jacob Have I Loved, Bridge to Terabithia*[2]), delivered an address at an NRRC conference in Athens, Georgia, in February, 1993. The theme of the conference was "Developing Engaged Readers in Home and School Communities." In her address, Paterson explained the power that children's literature can have both on our own lives and on the lives of the children with whom we work [see Box 2–1].

As Patterson indicated, children's literature has tremendous power to captivate students and engage them with literacy tasks. A major focus of the NRRC has been on ways that the power and engagement of children's literature can be used to help students develop the literacy skills and strategies they need to become lifelong readers and writers. Many teachers nationwide have begun to implement literature-based reading instructional programs,[3] and much NRRC research has been devoted to the factors that promote students' engaged reading in literature-based reading programs that include skill and strategy instruction.

[Box 2–1. Katherine Paterson on the Power of Literature]

That is our work, isn't it — yours and mine? To give stories — to provide the nourishment and healing and joy of books — the full power and glory of language — to those of whatever age who need literature for the spirit as they need food and drink and shelter for the body. There are difficulties in the work each of us has chosen, and I certainly do not minimize the tough challenge each of you faces every day. But, unlike many people in this world, once upon a time, you and I received the gift of language, spoken and written, the language of the present and the language of the ages — a treasure beyond measure. And beyond that, you and I are allowed every day to share that treasure with others. Maybe we're not living a fairy tale — but it's certainly a glorious adventure. I'm glad we're in it together.[3]

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[Key Idea] Phonics is one important component of a beginning reading program and should be taught explicitly within the context of authentic reading and writing activities.

For example, phonics instruction can be integrated effectively into literature-based environments [see Box 2–2]. The NRRC has explored a number of programs that take into account students' needs and interests, provide opportunities for students to interact socially, support the growth of diverse students on a variety of reading levels, and help to promote the engagement of young readers.[7] Specifically, NRRC programs incorporating these factors include Concept-Oriented Reading Instruction (CORI), Transactional Strategies Instruction (TSI), and other elementary-level, literature-based reading instructional programs developed or implemented by teacher-researchers.

[Box 2–2. Where's the Phonics in NRRC Research?]

For decades, how, when, and whether phonics should be taught in order to help students learn to decode unknown words has been the subject of much research and debate and has become a political as well as a pedagogical issue. Reports such as Rudolph Flesch's *Why Johnny Can't Read*, published in 1955, Jeanne Chall's *Learning to Read: The Great Debate*, in 1967, and the more contemporary *Beginning to Read: Thinking and Learning About Print*, written by Marilyn Jager Adams in 1990, have added to the research base on phonics instructions, but may have left educators trying to make sense of and apply seemingly conflicting ideas on teaching phonics.[5]

NRRC researchers have contributed to educators' knowledge regarding how and when phonics should be taught in the elementary school reading program. This research suggests the following principles for teaching phonics[6]:

1. Phonics instruction is one important component of a reading program, but should not be the focus of the program. Reading aloud to children, guiding children to read text themselves, and encouraging students to read and write independently and with one another are also essential parts of the reading instructional program.
2. Phonics can be taught effectively in a variety of ways.
3. Phonics can be taught in literature-based reading instructional programs.
4. Phonics should be taught explicitly and in conjunction with meaningful reading and writing experiences.

The debate over teaching phonics rests not on whether phonics should be taught, but rather how and when it should be taught so that all students learn to break the code of the English language. NRRC research has helped educators to learn more about ways they can teach phonics in conjunction with engaging students in the reading of meaningful texts.

Concept-Oriented Reading Instruction

[Key Idea] Motivation to read and reading ability are synergistic, mutually reinforcing phenomena.

In the CORI program, informational books and trade books were used in content-area subjects such as science and social studies to help students expand their interest in and motivation for literacy and content-area learning. CORI helped students learn to use a variety of literacy strategies, gain a deeper understanding of content, and collaborate with peers in literacy learning activities [see Box 2–3]. Through this instruction, third and fifth graders increased their level of engagement significantly.[8] CORI has helped teachers to emphasize both literacy and content-area learning while promoting students' motivation to read and learn. Because children who are intrinsically motivated to read become more avid readers than children who lack such motivation to read, the emphasis that CORI places on motivation is critical for developing lifelong readers.[9]

Transactional Strategies Instruction

In the TSI program, researchers Rachel Brown, Lynne Coy-Ogan, Pamela Beard El-Dinary, Michael

[Box 2–3. CORI: A Motivational, Student-Centered Perspective]

NRRC researchers Rachel Grant, John Guthrie, Lois Bennett, Mary Ellen Rice, and Karen McGough explain the difference between CORI and other reading instructional programs:

> *We have seen that real-world projects are a motivating point of departure for improving reading. Our instructional framework enabled students to observe the world around them, personalize their interests, choose books, and take ownership of their learning. We guided the acquisition of concepts and taught strategies for reading about those concepts through modeling, scaffolding, group work, and independent work. Ultimately, students were responsible for their own development.*
>
> *This instructional framework is unique because it is inclusive. Reading programs that emphasize scientific observation often neglect strategy instruction and peer-peer interaction. Programs that emphasize cooperative learning usually do not provide strategy instruction or real-world orientations. Programs that center on strategies rarely situate those strategies in a student-selected pragmatic context or allow for peer-peer social learning. Reading programs devoted primarily to language seldom place enough emphasis on going beyond literature to explore the scientific and social world around us.*
>
> *The center of this instructional framework was the self-determining learner. Our major focus was not the reading program, teacher, authors, cooperative group, conceptual area, or observational activity – it was the learner. When students experience literacy as a vehicle for navigating both outside and inside their private worlds, they learn to determine their futures as readers and as persons.*[8]

Pressley, Ted Schuder, Peggy Van Meter, and their colleagues demonstrated how students and teachers can work together to make and create meaning from the texts they read.[11] Cognitive strategy instruction, in which students are taught and then expected to use various reading strategies, and discussion of texts are emphasized throughout the program. TSI is a long-term program. It involves explanation and modeling by the teacher, focuses on the usefulness of the strategies taught (with the teacher coaching and demonstrating the use of the strategies), and includes discussions about the texts read.

TSI is "transactional" in that the instruction emphasizes that meaning resides in the transaction between the reader and the text, that meanings of texts can be created through interactions with other group members, and that students' responses to texts influence the instruction of the teacher. Specifically, TSI helps students to determine when, why, and how to use reading strategies such as thinking aloud, using background knowledge, verifying, predicting, using word identification fix-up strategies (e.g., how to guess, reread, skip words, and use picture clues to figure out unknown words), reading for gist and summarizing, looking back, problem solving, monitoring, visualizing, and clarifying when reading texts.

Other Literature-Based Programs

Other NRRC studies documented the efficacy of teaching skills and strategies in reading programs where trade books and children's literature are used extensively. Many of these programs incorporated alternative assessments for examining readers' and writers' performances on and in various literacy tasks [see Box 2–4].

To help develop engaged readers, James Baumann developed a literature/strategies–based program that he taught to his second-grade class while on a year-long sabbatical from the university. Jim based his program on the principle of providing students instruction within a print-rich environment

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[see Box 2–5]. The students responded positively to this program. For example, in the published class book *About Me Stories*, students shared some of their feelings about reading and related school experiences:

> Chantel wrote, "I love to read and write and tell jokes ... I have a nice teacher, and he reads stories to us all the time." Jason stated that "I am good at reading," and Kristen commented, "I like it [school] a lot because we read a lot. We have easy books to read. Some are hard to read but I can read them even if they are hard." Elizabeth noted matter-of-factly, "I like my teacher. I like school. I like to read."[14]

[Box 2–4. Assessment in a Literature-Based Reading Instructional Program]

The assessment of literacy has changed significantly over the past years. As researcher Peter Winograd explains:

> *Change, when it finally comes, often happens more rapidly than anyone could imagine or predict. This is certainly the case with assessment, particularly the assessment of literacy. Across the U.S., teachers are exploring and creating alternative methods of evaluating and assisting their children's growth as readers and writers.*[12]

Through looking at assessments that focus on students' reading activity, motivation to read and write, or recording the literacy activities of students in their homes, NRRC researchers have contributed to helping teachers understand alternative ways to assess their students' literacy development.[13]

In addition, Jim's students grew in overall reading ability, averaging two grade levels of growth between fall and spring informal assessments.

In another study, NRRC researchers Steven Stahl, Kathleen Heubach, and Bonnie Cramond explored ways to support the growth of beginning readers through fluency instruction. In this program, second graders increased in their reading growth and engagement through a reading structure that included a basal or literature anthology lesson (in which stories from the basal reader were introduced by the teacher, sent home to be read by the students, read with student peers in partner reading, and used as a basis for reading skill and strategy instruction), a home reading program, and a free-choice reading time.[16] What made this program effective? The authors stated:

> We believe that this approach is a balanced one, one that helps the children who are struggling, and allows those who are achieving well to continue to grow, one that provides support for second-grade children as they make their journey from *Brown Bear* to *Ramona*.[17]

Additional NRRC studies have shown other ways to promote the development of engaged readers in literature-based reading instructional programs.[18] NRRC research has helped teachers promote the literacy engagement of diverse students and students for whom English is a second language.[19] For example, a series of studies[20] has addressed how to design and implement a curriculum to expand students' multicultural understandings [see Box 2–6]. Other research programs have explored using technology as a tool for students' literacy development, a task not easy to accomplish according to NRRC researchers Linda Labbo, David Reinking, and Michael McKenna: "One of the biggest challenges fac-

[Box 2–5. Instruction Within a Print-Rich Environment]

While teaching second grade, Jim Baumann strove to provide students an enriched reading and writing environment that included embedded skill and strategy instruction:

> *My perspective on teaching and learning literacy was based upon the three-part principle that immersion in a rich literate environment, explicit teacher instruction in literacy skills and strategies, and daily massed practice in literacy activities are essential for success in reading, writing, and oracy. I implemented this philosophy through a series of daily or regular routines that included: (a) talking and oral sharing (e.g., at a daily "Class Meeting" time); (b) reading and writing sharing (e.g., during "Reader's/Writer's Chair" time); (c) reading numerous picture and chapter books to the children in multiple contexts; (d) individual and interactive reading practice times (e.g., during our daily* ***DEAR*** *–* ***D****rop* ***E****verything* ***A****nd* ***R****ead – time); (e) an intensive, daily reading strategy instruction period; (f) regular process writing periods; (g) a weekly "Reading/Writing Buddies" period in which my students read and wrote with fifth-grade partners; (h) spelling and handwriting lessons, which were often integrated into writing or content subjects; (i) and various home-school literacy activities (e.g., children taking home the stuffed "Leo the Read-With-Me-Lion" to share a favorite book with parents, caregivers, or siblings). In short, our days were filled with books, writing, literature, and talk about each.*[24]

ing teachers in the late 20th century is knowing how to help students learn to use a computer as a literacy tool."[22] Technology can be used to support and enrich literature-based reading instructional programs in a variety of ways. For example, NRRC research has helped teachers engage young children in the use of electronic storybooks in their classrooms,[23] multimedia book reviews to encourage students to read independently,[24] and captioned videos to help increase students' vocabulary and comprehension skills.[25]

Home and School Connections

Developing an understanding of relationships between literacy events in a child's home and the literacy events that take place in the preschool and elementary school classroom has become an important topic of inquiry, as noted by NRRC researcher Lesley Morrow and colleagues:

> Awareness about the powerful influence of the family on children's literacy development has gained national prominence in recent years. Increasingly, educators, parents, policy makers, and citizens from all walks of life are being told about the importance of parents reading to their children at home. We have also been told about the critical nature of literacy experiences at home and about the value of parental involvement in children's school experiences from early childhood through adolescence. The interest in and support of how literacy is used in families, as well as the study of the relationship between the use of literacy in families and the academic achievement of those children, along with the design, implementation, and evaluation of programs to facilitate literacy development in families, have all become synonymous with the term "family literacy."[26]

[Key Idea] Literacy learning occurs both at school and home, and connections between home and school enhance children's learning in both environments.

Previous research described children's home and school environments in relation to their classroom literacy achievement. Current research, however, focuses on the multiple literacies that children possess, and how home and school literacies support each other.[27] NRRC research has explored home

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and community factors that promote the development of engaged readers, the beliefs that parents and caregivers hold about their children's literacy development, and ways to enhance the connection between home and school literacies.

Parents and caregivers from diverse backgrounds support the literacy development of their children by creating a variety of nurturing environments. NRRC research has shown that preschool children become engaged readers when they are in (a) print-rich environments, where they are read to and given opportunities to read, where they see their caregivers read, have opportunities to engage in pretend play, are encouraged to interact with environmental print, and visit the public library; (b) language-rich environments, where they are encouraged to have discussions with their caregivers; (c) knowledge-rich environments, where they learn about the world through such media as television and computers, and where they interact with the outside world by taking trips and talking with knowledgeable people about topics of interest to them; (d) nurturing environments, where they interact with a variety of people who believe that one purpose of literacy is to entertain; and (e) home environments, where they make connections with their schools.[28]

[Box 2–6. Multicultural Learning and Literacy Development]

NRRC researcher Louise Tomlinson explained how multicultural learning can play a central role in the literacy curriculum:

> *By attending to the cultural issues which may profoundly affect students' perceptions of other ethnic groups, we can transcend the traditional and superficial approaches of multicultural instruction that are only celebratory or additive. We can surpass those approaches that focus only on heroes, holidays, music, costumes, and foodways – and focus there only at discretely designated times of the year or in discrete units designated for multicultural instruction. The definition of stages of ethnic identity development and related curricular goals provide us with a clear view of ways in which individuals think about cultural issues and, therefore, how we can identify opportunities in the context of instruction that can be emphasized to foster more positive self-concepts, more positive and more informed attitudes toward others, and greater interest in the critical aspects of cultures within and beyond our students' daily lives.*[29]

NRRC studies support the notion that parents and caregivers from a variety of cultural, ethnic, and linguistic backgrounds promote the literacy engagement of their children by providing an environment where literacy is treasured. As former First Lady Barbara Bush noted:

> This link between the literacy level and practices of the parent and a child's success in school seems clear; however, we all know the success stories of children whose parents lack formal literacy skills. Often, literacy is *valued* in those homes, and the parent finds ways to *support* the child's educational development. Where literacy is valued, it is nurtured.[30]

Preschool children from a variety of sociocultural backgrounds have rich home literacy experiences, and NRRC research has helped caregivers and teachers learn to value these experiences more fully. For example, the following is an excerpt from a diary written by a low-income, European American parent who was chronicling her child's literacy learning at home:

> She start by saying her ABC twice. then she asked her father for a quarter to buy wrestling cards she asked her sister to take her to the store to get them Her sister and brother take her to

> the store at 1:20. She comes back and said its too windy it will blow me away. I tell her no it won't it never blowed me away when I was little like you. she said mom you were never little like me your my mom so how can you be little like me. then she starts counting on the calender. then she play with her ABC maginets on the regirator singing ABC's she keep on asking when she goes to school she said Do I go to school tomorrow or the next day she said I bother get my clothes ready I tell her wait until tomorrow and you can get them ready for the next day she said OK I will she sing Hot Cross buns she plays mario with her brother listen to radio 92Q with her sister and try to sing along. I call her father to help me with Angle in the Ged book and she comes in to show us her right Ankel and left we told her we're talking about Angle not Ankel they may sound alike but difference.[30]

As can be seen through this diary entry of a mother who values and appreciates the literacy learnings of her daughter, rich literacy opportunities exist for children in a variety of homes, quite independent of a family's socioeconomic status.

NRRC research has helped us to see that the connection between home and school literacies can be enhanced in a variety of ways. For example, NRRC researchers have explored the use of classroom libraries that contain books that students can take home to read alone or along with audiotapes[31] and implementation of family literacy programs.[32] Researchers at the NRRC have also explored "creating parallel practices" in which parent, teacher, and student journals; storytelling; reflections; open written communications; family stories; learning albums; and literacy conversations are used to connect students' home and school literacies.[33]

Through connecting students' home and school literacy experiences, all involved can show great benefits, as can be seen in the following note from a parent to Betty Shockley-Bisplinghoff, an elementary school classroom teacher and NRRC researcher who was able to make these connections for her students:

> Adam started bringing books home from school. If I was excited about the book and let him know I was and really wanted to hear him read, he would be very much so. I would always tell him, Adam be sure and get US another book to read. He would. We had a great time doing journals. We owe that to Mrs. Shockley! Thanks! In short, if I was excited and wanted to hear his books – so was he.[34]

Thinking About and Discussing Literature

NRRC research has contributed to our understandings of how to engage preschool and elementary-level readers by helping students think about and discuss literature. For example, Michelle Commeyras and her colleagues developed a program to promote students' reading comprehension

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[Key Idea] Thinking and talking about books promote children's critical understanding of what they read.

and critical-thinking abilities.[35] After the teachers modeled how to generate questions [see Box 2–7 for an example], they encouraged students to generate questions about texts they read and then to discuss their answers to these questions with their teacher and peers. Two students involved in these critical-thinking activities commented on the positive impact of this program. Julie said, "I think we pay more attention to the story when we get to make up the questions," and Wendell commented, "You can't learn unless you ask questions."[38]

[Box 2–7. Modeling How to Generate Questions]

Second-grade teacher Georgiana Sumner modeled how she generates questions when she is reading, encouraging her students to do the same:

> *The story I'm going to read to you today is one I read for the first time the other day. As I read it to myself, I started thinking of questions. I either got answers to the questions along the way, or I had more questions. While I read this story to you today, I want you to think about questions you want to talk about. The title of the story is* The Black Snowman,[39] *and it was written by Phil Mendez and illustrated by Carole Byard.*[40]

In so doing, Georgiana set the stage for the discussion that would ensue based on the questions that she and her students generated.

Janet Almasi, Linda Gambrell, and their colleagues have also explored the important role discussion can play in the elementary-level literacy classroom. Results of several studies indicate that when students discuss what they are reading, they make more connections to other texts and demonstrate high-level oral and written responses.[39] Further, students demonstrated more in-depth discussions when the discussions were peer-led instead of teacher-led.[40] As Dominic, a student in the fourth grade, explained:

> I think it's better when the kid brings up the point, and they discuss what the kid said, more than when the teacher brings up the point. I don't think the kids are as interested [then] because … they didn't bring up the point. I think the kids need to make their own discussion.[41]

NRRC research suggests a few tips to foster engaged discussion in their classroom:

1. Encourage students to ponder confusing aspects or to challenge the text.
2. Provide opportunities for students to explore issues that are personally relevant to them.
3. Encourage students to interact and challenge ideas during discussions.
4. Limit the number of questions and the amount of teacher talk.[42]

In conclusion, NRRC research has helped us to foster the reading engagement of students in prekindergarten through the elementary school years. We have created and evaluated programs that integrate the reading of literature with skill and strategy instruction, connect parents at home with teachers at school, and teach ways to help students think about and discuss literature.

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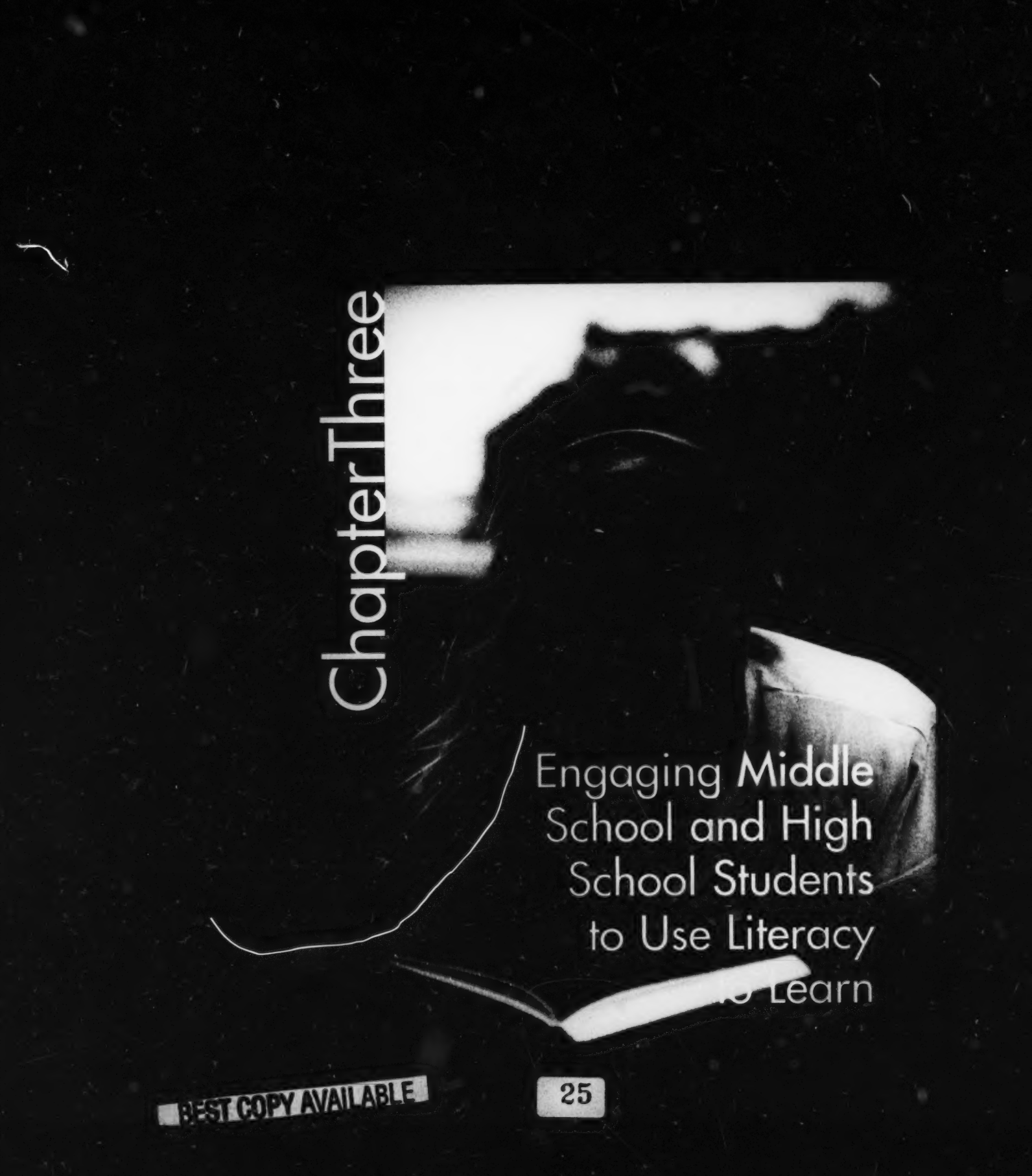
Chapter Three



Engaging Middle School and High School Students to Use Literacy to Learn

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Although middle and high schools present unique challenges to educators, it behooves us to keep developing innovative programs aimed at increasing achievement and learning. These programs offer students a chance to become readers and thinkers, and allow us to further our understanding of engagement.[1]

As NRRC researcher Cynthia Hynd noted, the adolescent and young adult years involve many opportunities for students to grow intellectually. These opportunities provide secondary-school teachers with the challenge to initiate instructional programs, curricula, and techniques that enable students to develop into mature readers and thinkers. Several lines of inquiry at the NRRC have examined ways to expand conventional secondary-school literacy and content-area instruction to offer teachers and students thoughtful, innovative approaches to teaching and learning. This chapter first describes research on reading to learn content and reading for pleasure; it then turns to a presentation of studies examining discussion as a vehicle for student growth and learning.

Reading to Learn and Reading for Pleasure

The literacy needs and instructional programs of students in secondary school differ from the literacy demands and programs of students in elementary school.[2] For example, middle school and high school students are faced with reading and writing in separate subject domains such as history and science, as opposed to the integrated curriculum provided in many elementary classrooms. There is also ample evidence that middle school and high school students spend less time reading for pleasure than their elementary school counterparts.[3] NRRC research has helped contribute to teachers' understandings about how to support middle school and high school students' reading engagement in content-area classes such as history and science. Our research has also explored adolescents' interest and habits in reading for pleasure.

Reading in History

NRRC researchers Cynthia Hynd, Steven Stahl, Bruce Van Sledright, Bruce Britton, and colleagues have helped explain how using multiple texts rather than a single textbook in history classes can help

[Key Idea] The use of multiple documents, as opposed to a single textbook, fosters students' interest in and learning of social-studies content.

foster middle school and high school students' understanding of social-science content.[1] In one study, Cynthia and her colleagues explored the use of multiple texts in history classes. In two classes of 10th-grade advanced-placement American History, students read and responded to multiple, original documents (e.g., information on the Gulf of Tonkin incident and the Tonkin Gulf Resolution) presented to them on computer screens [see Box 3–1 for other uses of technology]. Texts included telegrams, newspaper articles, book excerpts, editorials, and historical analyses. The students were allowed to read the documents in any order and worked in small groups to discuss and write about the documents they read on the computer screens. The discussions of the groups were analyzed by the researchers.

[Box 3–1. Using Technology to Enhance Literacy Engagement]

NRRC researchers have explored various ways that teachers can use technology to increase students' reading engagement. For example, researchers David Reinking, Steven Bonham, and Janet Watkins used multimedia book reviews (which included audio recordings and still photographs) rather than traditional book reports to encourage students to respond to the texts they read.[5] Students were taught how to use Hypercard, a multimedia authoring system for Macintosh computers, to create multimedia presentations about the books they were reading. Students who produced these unique book reviews read more, were more enthusiastic about reading, and socially interacted more positively with each other and with their teachers. As Ms. Pearson, a classroom teacher involved in the project, noted:

> *Several parents told me throughout the year how pleased they were that we were involved in this research project. They [the parents] were able to see drastic changes in their children throughout the year. Their children were now completely reading books and asking for more. The parents were very excited about the changes.*[6]

Technology has the potential to change the way we view and teach reading and writing. NRRC research has helped teachers investigate ways that technology can help transform literacy instruction in the future and improve current literacy instruction.[7]

In one such discussion, students Linda and Jill talked about the document they were reading about the Gulf of Tonkin incident:

> *Linda:* He's saying possible attacks that were gonna happen never happened.
>
> *Jill:* Wait, so is he like in the military or just some guy on a fishing ship that sees this?
>
> *Linda:* No, because he said, "I had led the air action against the real attack," and again, he's "senior aviator over the ship," so he's military.
>
> *Jill:* So he was in a plane flying over the Tonkin Gulf, right now or something?
>
> *Linda:* Well, not likely – not when he's telling the story. He's like saying where he is, but he's like positioned himself.
>
> *Jill:* But he actually saw the attack? Basically, he was above the water when it happened?
>
> *Linda:* Yeah.
>
> *Jill:* I got it.[8]

As Linda and Jill document, the use of multiple texts enabled some of the students to become engaged with and knowledgeable about history content, or as the researchers noted, to help students "think like historians." However, many of the students in these studies did not become so engaged, perhaps because of their lack of initial knowledge about the topic studied or their lack of ability to analyze historical documents. As the authors concluded:

> It will likely take a great deal of time and effort to move high school students toward thinking in a constructivist manner about history. However, we believe the time and effort is worth it. Not only will they be better prepared to attend colleges and universities where that perspective is pervasive, they will also learn a way of thinking that should help them become more critical consumers of the often contradictory and confusing messages about vital national issues that appear in newspapers and magazines and on television.[9]

In another study, NRRC researchers Bruce Van Sledright and Christine Kelly observed how adolescents used multiple texts to learn about exploration and colonization in an American history class.[10] The researchers worked with a classroom teacher who used both a textbook and trade books, and they documented how one group of students in this class used these sources to research colonization. Students in the class realized the value of using multiple texts to conduct historical research. For example, two students explained why they thought it was important to use more than one text when studying colonization in American history. Ben commented, "You can see two points of view like one person might not think the same thing as someone else," and Andy commented, "Sometimes you can compare information. Then you could hear both sides so you can choose which seems the most likely."[11] Bruce and Christine concluded from this study that "the presence of any array of texts, when students have some control over their own learning, increases their engagement in reading history."[12]

NRRC researchers Steven Stahl and Cynthia Hynd offered the following guidelines for middle school and high school teachers to consider when using multiple texts to help students learn history:

1. Teach students to analyze historical documents or to "think like historians."
2. Set a purpose for students' reading of texts.
3. Build background knowledge of topics with which students may not be familiar.
4. Help students to evaluate the sources they use.
5. Teach students how to write about and from multiple perspectives.[13]

By providing opportunities for middle school and high school students to read multiple documents in history and teaching them how to compare and contrast content from them, teachers can significantly increase their students' reading engagement.

Reading in Science

NRRC research has helped teachers learn ways to increase students' understanding of complex science concepts. There have been two strands of inquiry: one examining the use of analogies as a learning tool and another involving the learning of counterintuitive science concepts.

Use of analogies. Shawn Glynn and colleagues explored how science teachers can use analogies to increase students' engagement in science learning.[14] In one study, Shawn randomly assigned

[Key Idea] Using analogies between familiar ideas and unfamiliar science concepts aids students' learning and appreciation of science content.

students in seventh- and eighth-grade middle school science classes to either a control group or an experimental group. In the control group, students used a study guide that directed them to the important points they should focus on when reading about cells. In the experimental group, while reading a text about cells, students were encouraged through a study guide to generate analogies to help them understand how cells work [see Box 3–2 for an example of a study guide that prompts students to create analogies]. After students read the study guides and the text about cells, they were asked to write an essay in which they explained how a cell functions to a student who had no knowledge of the workings of a cell. Shawn found that students who generated analogies (e.g., a cell is like a factory) recalled more information about cells than those who did not.

[Box 3–2. A Study Guide with Analogies]

Shawn Glynn and his colleagues created study guides to help students generate analogies when reading. In the following example, students were prompted to think about analogies for the workings of a cell. The researchers explained how they might do so by providing an example of how one might compare an eye and a camera.

> *While you are studying, please try to think of analogies for the cell, its parts, and their functions. Compare things you know to the cell. For example, if you were studying about how the human eye works, you might compare it to a camera. To do this, you would do the following: (1) Think about the eye, (2) Remember what you know about a camera, (3) Think about the features of the eye and a camera, (4) Compare similar features (e.g., both have a lens, and the lens cap is like an eyelid), (5) Think about where the analogy breaks down (e.g., the camera lens is made of glass, but the eye's lens is made of cells), and (6) Draw conclusions (e.g., about the causes of vision problems). Just as this analogy compared the camera to the eye, you should compare things you're familiar with to the cell, its parts, and their functions.*[1]

In addition to using study guides that prompted students to use analogies to understand science content, Shawn and his colleagues investigated ways that textbook authors can use analogies in their writing to help students better understand the material they are reading and ways that teachers can use analogies in their teaching of various science concepts. Shawn and his colleagues explained the steps teachers can use to teach science concepts with analogies. In the example that follows, Judith Davis, a middle school teacher, encouraged Rachel, one of her students, to read to the class a newspaper article about a satellite that fell to earth. Judith then helped her students to understand how a satellite functions by explaining how a satellite is like a penny falling into water. She followed six steps in using analogies that Shawn and his colleagues found to be effective in teaching science concepts:

1. *Introduce target concept.* Ms. Davis restates the main idea of the article: Satellites can twist, turn, and "skip" unpredictably when they reenter the atmosphere. This is the basic idea that the teacher wants students to understand. But this idea must be connected to students' previous experience and science learning.
2. *Cue retrieval of analog.* Ms. Davis reminds students that a falling penny can twist, turn, and skip unpredictably when moving through the water. She may ask students to remember viewing a penny, or to imagine a penny in their minds; she may also actually demonstrate the movement of

a penny in a clear bowl. She emphasizes that the movement of a penny is like the movement of the satellite.

3. *Identify relevant features of target and analog.* Ms. Davis identifies relevant features of the satellite phenomenon (e.g., reentering satellite, vacuum of space, and atmosphere) and the penny phenomenon (e.g., the falling penny, air, and water). The phenomena are similar in that they both include an object moving from one medium into another of greater density.
4. *Map similarities.* Ms. Davis compares or "maps" similar features between the satellite and penny phenomena. This is done by drawing diagrams on the board with arrows connecting similar features. For example, she may show the satellite entering denser atmosphere and turning due to variations in pressure. Simultaneously she may show the penny entering water and also turning due to pressure variations.
5. *Indicate where the analogy breaks down.* Ms. Davis points out the differences between the phenomena, such as the vast differences that might be involved when the satellite skips. She may show that the satellite travels 1,000 miles in descent, whereas the penny travels 10 inches in its descent. The analogy does not provide an accurate representation of the amount of distance the objects travel. In this sense, the analogy breaks down and does not represent the target concept.
6. *Draw conclusions.* Ms. Davis draws general conclusions for the students about displacements that can occur in objects moving from one medium to another medium. She points out that the conclusions refer specifically to the satellite and to the penny. She notes that the displacement principle can cover both of the examples given.[15]

Through using analogies to teach science content, teachers can better help students understand key concepts in the discipline. As Judith explained to John, one of her students:

> Analogies can be a big help to me when I explain new concepts to you and when you try to understand them. The trick is to use analogies carefully, keeping in mind their limitations and the wrong ideas that can arise when an analogy is carried too far. Used carefully, analogies can help you a lot, John, just as they've helped many of the scientists you've read about in your textbook.[16]

Learning counterintuitive science concepts. In another series of studies involving learning from science texts, NRRC researchers Cynthia Hynd, Mary McNish, and their colleagues investigated students' learning of counterintuitive physics concepts. For example, consider the following science question: "If you drop one sack of 100 potatoes and another sack of 10 potatoes simultaneously from a second story window, which one hits the ground first?" The intuitive response might be that the sack

with 100 potatoes would hit the ground first because it is heavier. However, the actual scientific answer, which is counterintuitive to many adolescents, is: "The two bags hit the ground at the same time. Objects free fall at the same rate of acceleration, regardless of their weight."[18]

Cynthia and her colleagues observed students in 11th- and 12th-grade physics classes learning about counterintuitive physics concepts pertaining to gravity, balanced forces, and projectile motion, and then interviewed them about what they learned. Depending on the topic the students studied, the students participated in laboratory experiments and read texts. For example, when studying gravity, students took part in laboratory experiments where they dropped objects of varying weights and shapes from the same height, wrote about what they found in the experiments, and read passages about gravity in their textbooks and in refutational text ("text that attempts to elicit conceptual conflict by presenting the popular intuitive conception, explaining that the intuitive conception is wrong, and then describing the accepted scientific theory"[19]). They found that neither lab instruction nor using the described texts helped students to explain scientifically (rather than intuitively) why various physical phenomena occurred. This study helped teachers and researchers develop plans for improving physics instruction in the future:

> The results of this study provide fodder for improving instruction. Based upon these results, the authors are now working at making labs more conceptual by involving students in designing the labs, as well as studying adaptations of texts that have incorporated students' suggestions. Additionally, ways of making physics more relevant to students who do not anticipate careers in science and avenues for instructing students in reading science texts are being explored. Finally, methods for confronting students' nonscientific conceptions in more powerful ways are being addressed. These methods include extending the length of instruction in counterintuitive concepts, allowing students to express their ideas and questions more fully during class discussions, relying on demonstrations and discussion rather than just lab to clarify concepts, and using several different sources of information for confirmation of concepts (e.g., more than one text, film, lab, teacher, etc.).[20]

Thus, by working with teachers and students, NRRC researchers are learning how to better support the teaching of science concepts in middle school and high school classrooms.

Reading for Pleasure

Students in middle school and high school read for pleasure less than do elementary school students. This diminished interest in pleasure reading is due in part to social pressures (e.g., peers perceiving students who read as being "uncool"), as well as students having less opportunity to read for pleasure in school because of the structure of the school day.[21] Moreover, the factors that influence many Euro-

pean American students' pleasure reading may differ from the factors that influence many African American students' pleasure reading.[32]

NRRC researchers Ruby Thompson and Gloria Mixon have helped teachers understand the nature of reading engagement for a group of inner-city African American parents and their middle school children. In one of the phases of their project, these researchers worked with African American parents in workshops that met one Saturday a month to show parents ways they might read and discuss pieces of literature with their children. The following is an excerpt from one of these parent-child book discussions:

[Key Idea] Parents are receptive and supportive of programs that help them promote their adolescents' reading for pleasure in out-of-school contexts such as community centers and public libraries.

Parent: Overall, the characters seem real to you?

Child: Yes.

Parent: Okay. How was that?

Child: Because they were, because they were Black people and it just like when they had people like kings and stuff. It's just like having a mother to guide [you].

Parent: But see, I thought it was a lot of stuff in there that didn't seem real to me because in 1770, I couldn't see them having a funeral and playing it up like that for a Black man because they still had slaves in those days. So I thought it was kind of unusual but educational.[33]

Thompson and Mixon found that parents who participated in the workshop sessions enjoyed discussing stories with their children and engaged in positive and successful reading experiences with their children at home. The success of these workshops may help teachers to see ways to involve parents of African American middle school students in their children's reading. As Thompson and Mixon concluded:

> Implicit in these findings are opportunities for schools to involve parents in their children's reading. Our study shows that parents have the schemata to engage in pleasure reading and that they may be prepared, through a workshop where strategies are demonstrated and behaviors are modeled, to engage their children in meaningful discussions about shared reading. The challenge for schools, then, may be to provide such workshops and use these at-home pleasure experiences as classroom fodder upon which other discussions may be built. Culturally relevant literature is favored by these parents and their children; but they also show that they enjoy good literature. Teachers and librarians may work with these parent/child teams to offer lists of stories under various categories so that the teams may select what they wish to read. Perhaps one evening a week may be targeted as "parent/child" reading periods, in lieu of homework assignments. Additionally, teachers may even send home pleasure reading materials to be used at home.[34]

NRRC researchers Donna Alvermann, Josephine Young, and Colin Green explored how culturally diverse groups of students in Grades 6 through 9 talked about and interacted with the texts they chose to read, ranging from books such as *The Lost World* to the *Sweet Valley High* series.[27] Students and researchers met after school in the local public library for 15 weeks to discuss books they had read in groups that the students called "Read and Talk Clubs." Several students, using pseudonyms of their choice, provided insights as to the reactions some of their peers exhibited toward them when they engaged in pleasure reading in school:

> *Athene:* I feel like I'm kind of weird cuz I read a lot. I mean, people look at me weird, you know?
> *Bunny:* People who read a lot usually get a title – "nerd" or something. You know, they don't want to be a "geek" or "nerd."
> *Crazy E:* I don't think you can say you're a nerd because you read.
> *Bunny:* Me neither.
> *Buzz:* But most people – I bring books to school and they look at me, like, oh my god, what kind of weirdo are you?[27]

In this project, students were provided with a comfortable outlet to interact with one another in an environment where their pleasure reading was supported by their peers in their weekly library sessions. Colin described how the sessions worked:

> We met with each group for a total of 30 minutes weekly. Members of each group made their own decisions about what they would read and how they would go about discussing what they had read.... Discussion usually centered around themes that the students chose. For example, one group wanted to read about relationships initially; another group elected to read on whatever topic they chose but with the understanding that they would try to find a common theme across all their reading.[27]

By providing us with glimpses into adolescents' reading and discussion of texts outside of school, this research helps us to view adolescents' nonacademic literacy from the unique perspective of students who do engage in pleasure reading outside of school. As Donna and her colleagues concluded, "Adolescents read when they want to, and that's more often than we thought."[28]

These and other studies have addressed how middle school and high school teachers can foster their students' reading engagement in history and science, in reading for pleasure, and within the literacy curriculum [see Box 3–3]. As Cynthia Hynd explained:

> [The] NRRC set out to study the engaged reader and to offer teachers ways to produce that engagement. We now understand more about ... the interaction of motivation with knowledge,

Box 3–3. Student-Centered Literacy Instruction in High School: Basic Tenets

A group of teacher researchers in the English Department at Cedar Shoals High School in Athens, Georgia, conducted a multiyear study of their literacy education curriculum and instruction.[29] They explored the process of moving from a teacher-centered curriculum that promoted passive learning to a more student-centered program that actively involved students with their learning (see Chapter 4 of this report for more details about this program).

In one aspect of this inquiry, Patti McWhorter, the English Department Chair at Cedar Shoals, and Sally Hudson-Ross, a professor of English Education at the University of Georgia, exchanged roles for an entire academic year. Patti taught Sally's preservice courses for aspiring high school English teachers, and Sally taught five periods of high school English normally taught by Patti. Through their job exchange, Patti explored student-centered literacy instruction in a college-level teacher-education environment, and Sally experienced this instruction from the classroom teacher's perspective.[30] From this job exchange, Patti and Sally learned some principles about implementing a student-centered literacy curriculum in high schools, which they framed in the following "Basic Tenets":

1. Student input into the daily workings of the classroom is solicited and encouraged by the teacher. The time spent involving and inviting students into the decision-making process creates a more productive working environment. Classroom decisions should be negotiated by teacher and students within acceptable parameters so that all can learn.
2. Students should be provided with a range of choices — in activities, in reading material, and in subject matter — in all aspects of their learning.
3. Student learning should have connections to the world outside school or be integrated into a meaningful context. A "need to know the information" must be established by the teacher working in concert with the students in order to motivate them to achieve.
4. Students are encouraged to examine their own work, critique its strengths and weaknesses, and set goals for continued improvement.
5. Depth of learning should not be sacrificed for content coverage. Language arts learning activities should serve multiple purposes and objectives in order to maximize instructional time.
6. Students should be involved in determining standards and criteria for assessment and evaluation within the framework of the instructional projects and in the larger context of the language arts course.
7. Parameters for projects are established by the teacher, but they are flexible parameters, subject to change if students' interest and students' learning can increase.[31]

strategy use, and social interaction. We understand the importance of texts in building knowledge and can recommend ways to improve the use of texts in content-area classes.... The challenge is to use what we know and set up classrooms where the conditions for engagement are evident.[32]

[Key Idea] A student-centered English curriculum involving choices and connections to the world outside school motivates and promotes secondary students' literacy learning.

Learning Through Discussion of Text

Reading need not be a solitary act. When students and their teachers share ideas, perspectives, and points of view with respect to reading materials, they come to deeper and more thoughtful understandings of the text content and the broader world in which they live. Several NRRC researchers have used text-based discussion as a vehicle for helping adolescents and young adults learn from texts, about texts, and about themselves through texts.

[Key Idea] Discussions about books in peer groups or among students across grade levels enhance students' involvement, interest, and learning in secondary content-area classrooms.

Peer-Led Discussion Groups

Donna Alvermann, Josephine Young, Dera Weaver, Kathleen Hinchman, David Moore, Stephen Phelps, Esther Thrash, and Patricia Zalewski explored text-based discussions in middle school and high school classrooms, but not in the conventional manner.[33] Rather than studying discussion from the teacher's viewpoint, as in many studies, they explored discussion from the student's perspective. Using a multicase method, the researchers studied discussion in various English, social studies, and language arts classes in middle schools and high schools at five

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different research sites across the United States. The researchers videotaped small-group and large-group discussions at each site, shared the tapes with their colleagues for comment and analysis, interviewed students about discussion, and invited the students themselves to view and comment on videotaped discussions.

Middle school and high school students from different geographic regions, of multiple ethnic identities, and from various economic backgrounds were involved in the study. There were three common themes that emerged from the analysis.

First, the students were consistent in commenting that discussion helped them understand what they read. As one student in the study noted, "If we had just read the story, people would just let the story drop, [but] as we discussed it, we saw a lot more depth to the story." Other reported benefits of text-based discussion were how the talk helped the students learn new vocabulary and how listening ability developed through discussions.[34]

Second, students were very candid about describing conditions that promoted discussion. Students indicated that staying on topic was important, and many noted the importance of participation in discussion, or "doing your part" as one student put it. There was a clear consensus that small-group discussions – as opposed to large-group or whole-class environments – were beneficial. One participant noted that "the small group is kind of nicer because it is more personal and people kind of listen to you more and get interested in it." Being able to join discussion groups that included classmates students liked or knew well was also reported by the students as an important condition.[35]

Third, students had opinions about discussion topics and tasks. When topics were perceived as interesting, students found discussions lively, but reported the reverse when topics did not interest them: "If the topic is boring, you ain't going to hear nothing." Students also indicated that it was the teacher's responsibility to select discussion topics that were exciting, and students held teachers responsible for defining discussion tasks clearly.[36]

Although there are potential limitations to discussion [see Box 3–4], Donna and her colleagues were clear that their research on students' perceptions of discussion documented significant benefits of small-group talk when it came to learning from texts. As the authors stated, "Students told us that discussion gives them a chance to be engaged, to test their ideas, and to gain respect for the ideas of others."[37]

Discussion Partners

Michelle Commeyras, Johni Mathis, and Georgiana Sumner also explored adolescents' perceptions of class discussions, but from a different perspective. Johni, a middle school language arts teacher, and Georgiana, an elementary teacher, paired up their students to engage in a variety of literacy experiences, such as writing and exchanging autobiographies and sharing and discussing children's litera-

[Box 3–4. Benefits and Costs of Student-Led Discussion Groups]

Despite the advantages of peer-led discussions, Donna Alvermann was conscious of potential limitations of this interactive organization. Using data from one of the research sites in the larger study, she examined closely the interactions of one five-member group of eighth graders who identified themselves as highly vocal discussion participants.[37] Although these students were very thoughtful, engaged with the discussion topics, and insightful, there were aspects of the group structure that caused Donna to encourage teachers to consider the costs as well as the benefits of student-led discussion groups. For example, Donna noted how Laura pulled back from participation as the year progressed. Laura was perceived as a highly outspoken participant by other group members. Alice stated that Laura was "very argumentative," and Brad commented that "she argues a lot . . . nobody can dare oppose her." Later in the year, Laura began to withdraw, commenting that "I think I used to like talking. I don't like it as much anymore because I have gotten to the point that I get tired of people telling me how I talk or when I am wrong."

Donna also noted how Brad was silenced by other group members. Brad thought of himself as a talker and found discussion to be useful for learning. "I love to talk and discuss things. . . . I felt you get a lot more out of learning when you get into the topic rather than mope around in the corner." But fellow group members began to resent Brad's garrulous nature, becoming less tolerant of his opinions and even closing him out of some discussions. Laura noted that "He is good at getting it [discussion] going, but sometimes he won't let other people talk." Laura then commented on how she and other group members had trained Brad to let others speak. "We kind of force him to let us talk."

Donna still finds many positive aspects of peer-led discussions in secondary-school classrooms. However, on the basis of her research, she worries that there are others like Laura and Brad who "experience some of the not-so-empowering aspects of speaking their minds." Therefore, she encourages teachers to be aware of potential group pressures and dynamics when initiating peer-led discussions.

ture. Michelle, a university professor, joined Georgiana and Johni in exploring how the cross-grade relationships affected their students' literacy learning.[39]

In one aspect of their study, Johni's eighth graders watched videotapes of Georgiana's second graders engaged in discussions of children's picture books. As the eighth graders watched, they examined their second-grade partners' participation. The older students found complimentary things to say about their partners. For example, students commented: "I like the questions and responses you gave," "You only talked two times [but] when you did talk, you backed up your opinion," and "Your question was important to the book." They also asked questions of their younger partners. For example, after watching the children discuss *The Black Snowman*,[40] a story that combines contemporary realism and historical fantasy, one student asked her second-grade partner, "Why did you think Jacob [the main character] didn't like the color black?" Another student asked a general question about reading habits: "Are you reading a book right now? If you are, what is it?"

The eighth graders also offered criticism regarding their partners' discussion strategies, often quite candidly. For example, one eighth grader commented on turn-taking: "You talk throughout the whole discussion. Give others a chance to speak even if you have something good to say." Another suggested staying on the topic: "Next time, when you have to talk in a class conversation, stay on the subject. And also don't be so quiet about your talking. Speak out." But the comments were intended to be friendly and constructive. For example, after watching her second-grade partner, Hank, participating in a discussion of the book *The Black Snowman*, Jenny asked Hank, "What did you mean when you asked, 'Why did he hate the lamp?'" She then directed him back to the book: "The picture in the book looked as though he was turning out the light to go to bed. If you read in the paragraph on the opposite page, it showed that he woke up angry about something. What do you think the answer could be?" Hank wrote back to Jenny: "When he woke up he was angry because he was poor."

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The research demonstrated that exchanges like Jenny and Hank's proved to be enjoyable and instructive for all involved. The students developed friendships, and the second graders benefited from positive models and thoughtful comments from older peers. The eighth graders also reflected on their own discussion techniques. As the teacher researchers noted, "Eighth graders also recognized some of their own behaviors during book discussions," thus providing them a window into their own roles and behaviors during middle school class discussions about texts.

Gender and Discussion

A collaborative group comprised of three NRRC researchers and two classroom teachers examined the gendered nature of secondary-school classroom talk about texts. Sally Randall and David Hinson, middle school language arts teachers, were enrolled in Donna Alvermann's graduate-level course on content literacy; they were joined by university researchers Michelle Commeyras and Josephine Young in a study that explored how the tacit rules for classroom discussion affected students' responses to texts they were reading that perpetuated sex and gender stereotypes. These researchers uncovered some interesting and complex patterns.[41]

One set of findings involved self-deprecating and discriminatory talk in the university classroom. Regarding self-deprecating talk, Michelle noted that female students often apologized for their thoughts or contributions. Michelle's poem titled "Sorry Talk," a portion of which follows, included some of the comments from female members of the class:

> Glenda says, "I'm sorry but I disagree."
> She's sorry.
> Faye promises that she "will shut up."
> She's sorry.
> Sharon confesses she "wasn't going to make another comment."
> She's sorry ...[42]

Discriminatory talk involved language that dealt with differences between people and things. For example, one European American student expressed concern when a female classmate from Taiwan, Liu-Shih, was afforded more time to make a class presentation than others. However, Liu-Shih explained to Donna that it would have been unfair to hold her to the same time limits as native English speakers, because she needed more time than they to formulate and articulate her thoughts in English.

The researchers also noted gendered talk in the middle school classrooms. For instance, when David introduced materials that involved gendered messages, the students often resorted to talk that silenced or excluded students of one sex or the other. When discussing a play about a female who

wanted to join an all-male soccer team, students' perspectives often fell along sexist lines. For example, a female student commented that "an all-girls team talks about 'girl talk' so boys would ruin everything." In response, a male student stated that, whereas previously he would have supported a mixed-sex team, his female classmate's comments made him reconsider. Another male student bluntly assessed the situation as showing the "stupidity of women."

In her middle school classroom, Sally struggled with the notion of neutrality, which she defined as avoiding doing things that might conflict with the values held by her students and their families. For example, following a discussion of Steinbeck's stereotypically gendered description of Kino, the female protagonist in *The Pearl*, Sally reported that she felt the discussion was "real awkward and real contrived." Sally indicated that gender was not "a burning issue" and "not my agenda." And given the community within which she lived and taught, she wondered, "Where do I cross the line in discussing literature and discussing values and marital relationships that in this community I better stay away from?" Her stance was to remain neutral during class discussions, not wishing to reveal her own positions so as not to influence the students' thinking or to conflict with the values of the students' family members.

Although the researchers uncovered some elements of discussion that concerned them (e.g., self-deprecating and discriminatory talk), overall, the participants reported considerable growth and development personally in exploring the nature of classroom talk about gender. Everyone saw interesting perspectives and growth in the middle school students, although they acknowledge that "the filters through which students experience and discuss such texts may perpetuate the status quo, and in the process, reinforce the very stereotypes that the discussion was originally designed to examine and possibly challenge."[43]

In conclusion, a number of NRRC researchers have examined the process of learning in secondary-school classrooms through discussion of texts. They have learned about the power of peer-led discussions, how cross-grade discussion partners are productive for both secondary-school students and younger partners, and how explorations of the gendered nature of talk about texts can lead to interesting philosophical and pedagogical issues. Coupled with research on providing more thoughtful approaches for learning from texts in social studies, science, and other content classrooms, we believe that teachers have at their disposal a number of empirically based and useful strategies for engaging secondary-school students in their learning.

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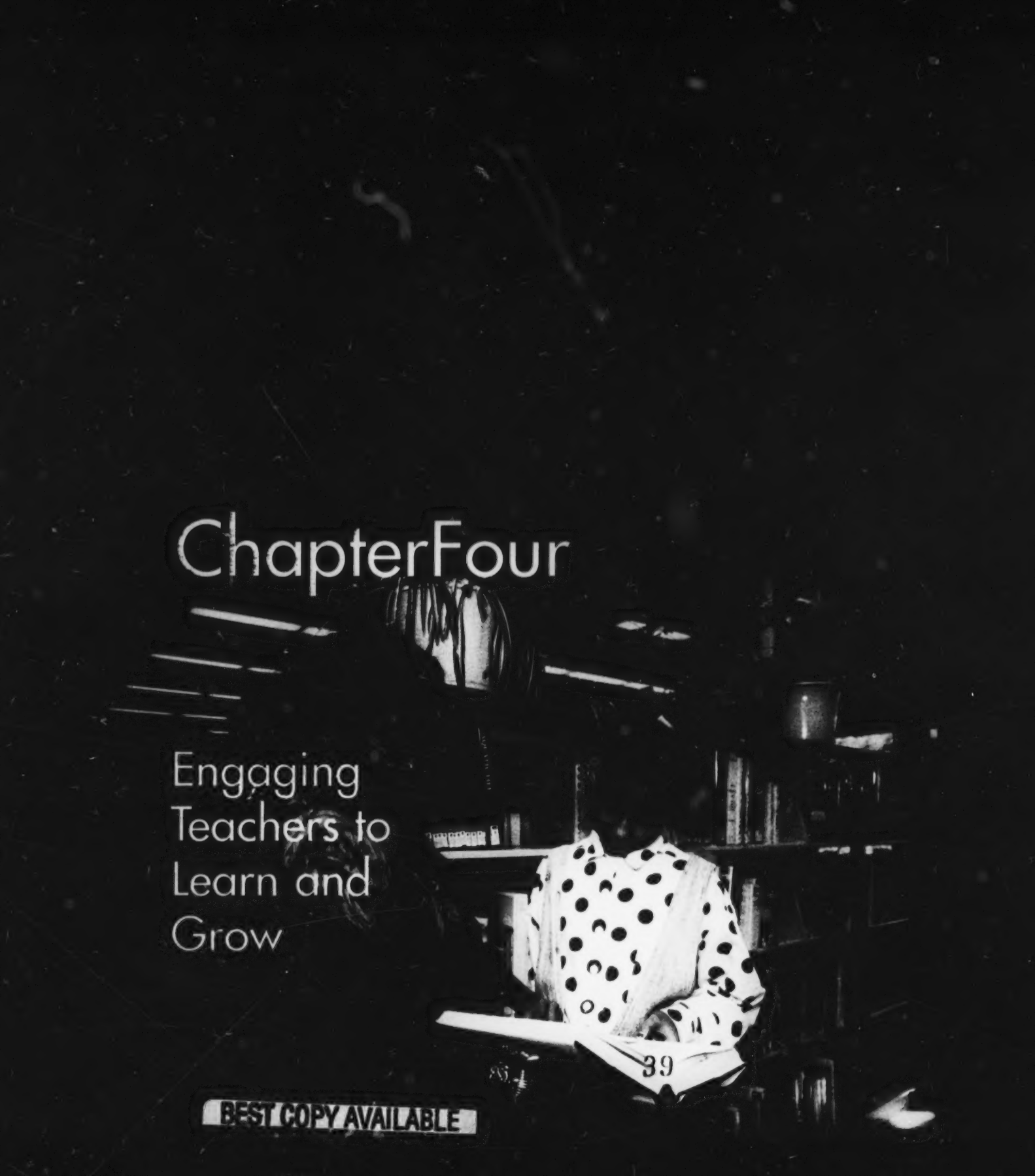
ChapterFour

Engaging Teachers to Learn and Grow



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We know that we have become better teachers because of this research opportunity. We agree with Eleanor Kutz, who wrote that becoming a teacher-researcher is one way to get better at teaching. We have a clearer understanding of curriculum development, the value of collaboration with colleagues, and the power and responsibility of being decision-makers. The challenge and stimulation of professional development surpassed our expectations and caused us to grow in ways we never experienced before.

–Mary Ellen Rice and elementary teacher colleagues in Prince George's County, Maryland[1]

This research has been very meaningful to me because I was searching for answers to my own questions. I was not looking for ways to improve my teaching for the board office, state auditors, or the professor of a graduate class. I was following my own curiosities.

–Beth Tatum, English teacher at Cedar Shoals High School in Athens, Georgia[2]

Dear Penny, Sally, and fellow researchers,
I had my first interview with Ms. Raiguel on Friday, November 18. I was somewhat nervous when I began the interview, but once we got started talking, everything went just fine. I interviewed Ms. Raiguel during my sixth period.... It was very fascinating to hear her talk about her ways of teaching. Since I had been in one of her classes, I could understand what she was talking about.

–Florencia, 11th-grade student-researcher in NRRC project[3]

These statements by Mary Ellen, Beth, and Florencia reflect the nature of much research at the NRRC, that is, studies initiated, guided, directed, or informed by teachers, and in some cases, students. In our quest to avoid sterile, laboratory-type research that has little relevance to teachers, we have taken our research into the actual environments in which reading and literacy learning occur: homes, communities, and classrooms.

In bringing our research into the real world, we have involved teachers and students, the persons for whom the research is intended. Our models of collaboration have been many.[4] Some studies have been initiated by university-based researchers but have had strong teacher input and guidance, such as research by Mary Ellen and her colleagues. Other studies have been teacher directed entirely, such as

Beth's exploration of literature discussions in her high school English classroom, a study within the School Research Consortium, a teacher-research community at the University of Georgia NRRC site.

All studies have been dependent on the experiences and wisdom of students in one way or another, but some researchers have gone further and involved them as coresearchers, as in the example of Florencia. She and other high school students were research partners in a series of studies in which they and university researchers sought to understand conditions promoting adolescents' motivation for literacy learning.

In this chapter, we provide descriptions of several of the collaborative and teacher-directed research studies at the NRRC. Although varied in many ways, the overall theme in these studies is that understanding how students acquire literacy can best be achieved by involving those most intimately involved with the process: teachers and students.

University and School Collaborative Research

[Key Idea] When teachers engage in the research process – by conducting their own studies or collaborating with school- or university-based colleagues – they acquire personal insight about teaching and learning, grow in professional knowledge and confidence, and affect instructional practices in positive ways.

Many NRRC research questions originated with university-based researchers, but because most questions involved teaching and learning in schools, implementation of studies required high levels of teacher participation and involvement. This implementation resulted in the initiation and growth of long-term university and school research collaborations, several examples of which follow.

Portfolios and Teacher Change

Ron Kieffer and Mark Faust of the University of Georgia teamed with Linda Morrison of South Jackson Elementary School and Cheryl Hilderbrand of Jackson High School in a multiyear project in which they developed literacy portfolios – collections of materials that demonstrate growth in reading and writing – along with their university and public school students.[1] Their objective was to avoid the double standard, that is, to experience first-hand what they were asking their students to do, in this case, create and use portfolios. Ron and Mark created portfolios in connection with their university

[Box 4–1. Portfolios for Teachers]

Linda Morrison used a personal portfolio as a means to demonstrate for her second graders the process of carefully selecting representative works to include in a portfolio.

> *The focus right now is on getting the kids to start creating portfolios and getting them to see it as more than just a collection of good papers. So, I modeled selecting something to put in my portfolio from some of the things that I have written recently, and just sort of talked through the process that I went through as I made my decisions.*[2]

Cheryl Hilderbrand found that the portfolio process also included a professional growth and development aspect for her as a high school English teacher.

> *I think that creating a portfolio is a really creative act, and it's something that starts taking on a life of its own. That's what any kind of piece of art does. . . . I think it [portfolio creation] is a process, but I think it is a process that changes, and that's hard to define. I really do think it can be a way for teachers to change and become better teachers, because it really changes the focus of what we do in the classroom.*[3]

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[Box 4–2. Multicultural Literature for Teachers]

The teacher book-club project had enabled participants to see beyond race, class, and economics as factors affecting family values. For example, after reading and discussing Marta Salinas's "The Scholarship Jacket," a secondary science student teacher commented:

> *One of the messages I saw in this story was that parents will always do what they feel is right for their child. They always want what is best for their children. I see this happening in my class regardless of socioeconomics.*[8]

Likewise, the book-club project helped participants recognize and confront cultural stereotypes of which they may not have been fully aware, as evidenced by an elementary student-teacher's soul searching:

> *The book club has caused me to be more open, not to prejudge. These are things that I thought I wasn't doing, but I do maybe not as much as I think I do. [Now] I look at each child as an individual, try to learn about the child's personal background and culture. Reading and talking about other cultures is making me do so.*[9]

classes, and Linda and Cheryl developed portfolios along with their second-grade children and high school English students, respectively. Their portfolio formats included conventional print versions as well as innovative electronic portfolios.[8] The researchers found that their experiences with portfolios not only enabled them to be more sensitive and effective in helping students develop as reflective, self-assessing learners, but the experiences also provided them a way to stand back from and examine their own professional development [see Box 4–1]. Among the things they learned was the affirmation that "we, as teachers, learn best by exploring the same experiences as our students."[9]

Teacher Book Clubs

Jim Flood and Diane Lapp of San Diego State University wondered if groups of veteran teachers and those in teacher education programs who read and discussed multicultural, contemporary adult literature in a book club might grow in their appreciation of cultural and ethnic diversity.[10] Participants read titles by authors such as Amy Tan (*The Joy Luck Club*), Sandra Cisneros (*Woman Hollering Creek, House on Mango Street*), and Toni Morrison (*The Bluest Eye*). Collaborating with public school teachers and administrators, Wendy Ranck-Buhr, Juel Moore, Janice Van Dyke, Linda Lundgren, Sarah Spaseck, Doris Alvarez, Alice Romero, and others, the research team examined participants' growth in multicultural awareness and recognition of the dangers of ethnic stereotyping [see Box 4–2].

The data indicated that all book-club members increased their understanding of multiculturalism, and that the books and other materials read prompted participants to reflect on and share their personal experiences. The authors concluded:

> By talking about the feelings, thoughts, and actions of literary characters, participants gained insights about cultures of which they previously had limited knowledge. They felt free to question the cultural experts without fear of being labeled racist because of their limited knowledge. This lack of fear freed participants to discuss cultural stereotypes, prejudices, and differences. With this sense of freedom came a heightened interest in learning more about these cultures.[11]

Through the book club, the researchers and research participants gained new insights into both their

students' and their own attitudes as teachers and researchers. Historically, many classroom-based educational research projects have been conducted with teachers as bystanders who stood back and watched or simply did what they were told by university-based researchers. In contrast, NRRC field studies have been conducted with teachers as full research participants, acknowledging their extensive experience and skills and capitalizing on their knowledge and wisdom. Both the portfolio and book-club projects were initiated and developed *with* teachers as full collaborators.

In NRRC university and school collaborations, there is no single collaborative model suggested or employed; each project has evolved in its own unique way [see Box 4–3]. In reflecting on the Concept-Oriented Reading Instruction (CORI) collaborative research program, Mary Ellen Rice and her teacher research colleagues commented that "active involvement in the organization and design of the CORI program gave us a sense of *ownership*. We had the freedom to choose topics that were of interest to us and met our school district's outcomes.... We were free to analyze, modify, change, or embellish the program as necessary."[17] As in other NRRC classroom-based studies, an invitation changed to collaboration, which developed into trust and friendships, and then evolved into confidence, independence, and ownership of the research process.

[Box 4–3. Evolution of a University and School Collaboration]

In the fall of 1992, Michelle Commeyras, a faculty member in Reading Education at the University of Georgia, was looking for a research site to continue a line of inquiry on children's critical thinking. A university colleague referred her to the principal of Alps Road Elementary School in Athens, Georgia, who, in turn, referred her to Georgiana Sumner, a second-grade teacher at Alps. Over the course of the school year, Michelle and Georgiana explored how the second graders developed in critical thinking as they read and discussed children's literature.[14] Even though the research questions were originally Michelle's, Georgiana soon became a full research partner, and the questions and study evolved as Georgiana and Michelle learned from and with the children. Getting a taste for research, Georgiana joined the School Research Consortium, along with her sister Johni Mathis, an eighth-grade reading and language arts teacher at Clarke Middle School, which is adjacent to Alps Elementary. Together they conceived of an extension of the second-grade study in which the eighth graders were invited to join the literary conversations, critiquing videotapes of the second graders' book discussions.[15] What transpired, however, were extended "literacy partnerships," in which second- and eighth-grade dyads shared autobiographies, wrote letters to each another, and ended up meeting in a celebration in which the eighth graders read books they had written specifically for their second-grade partners. Michelle commented that the second-year project "represented a move from university-initiated research to school-based research."[16] Further Michelle saw a "transfer of responsibility to Georgiana and Johni for defining research purposes, design, and methods." Regarding the second study, Michelle commented that "my role in Georgiana and Johni's research has been to aid and assist them in whatever ways they deem important (i.e., videotaping and providing leadership when writing about the research)." Thus, the roles of research initiator and collaborator come full circle through the collaboration of three researching teachers who sought to understand students' literacy growth and development through collaborative inquiry.

Teachers as Researchers

NRRC organizers recognized that knowledge and insight are possessed by those who work with preschool, elementary, middle, and high school students daily, namely, teachers. Most teachers are inquisitive about their work, and the questions they have can drive and guide research.[18] Therefore, research initiated and conducted *by* teachers has been valued and supported by the NRRC. Teacher research has occurred at multiple sites and in many configurations,[19] a few of which are described here.

Within- and Between-School Collaborations

The NRRC has supported teachers who have pursued research questions focused within their own schools. For example, Jane Litchko, principal of Jackson Road Elementary School in Montgomery County, Maryland, in collaboration with John O'Flahavan at the University of Maryland, explored ways to transform their school culture to accommodate an increasingly diverse student population. Jackson Road faculty took a number of actions including initiating inquiry groups to identify and study problems, forming cross-grade collaborations to address problems, using peer coaching to implement change, and employing teacher-research groups to implement and evaluate programmatic modifications.[20]

Betty Shockley-Bisplinghoff and Barbara Michalove, teachers at Fowler Drive Elementary School in Athens, Georgia, and JoBeth Allen, a teacher educator at the University of Georgia, had conducted prior classroom research on elementary students who struggled with literacy learning.[21] When supported by the NRRC, these same researchers sought to explore the impact of a multiyear home and school partnership program on the literacy development of children in Betty's and Barbara's first- and second-grade classes.[22] In their book, *Engaging Families: Connecting Home and School Literacy Communities*,[23] these teacher-researchers described how they enlisted the help and support of family members of the predominantly minority and low-income Fowler community to create a series of parallel practices (e.g., reading trade books at home and at school) to promote literacy learning in both home and school environments.

Teachers also looked beyond their own school when creating research collaborations. Faced with an opportunity to evaluate and modify their school governance and literacy education programs, teachers at Benton Elementary and South Jackson Elementary in rural Georgia engaged in a multiyear examination of language, literacy, and school reform. Supported in part by the NRRC, Benton and South Jackson teachers, in collaboration with JoBeth Allen and colleagues at the University of Georgia, engaged in classroom inquiry that allowed them to explore new literacy

[Box 4–4. Action Research and Research in Action in Jackson County, Georgia]

The *Exploring Blue Highways* project involved teacher-researchers from two rural elementary schools in Georgia. As indicated through the following comments, the action research conducted in this venture enhanced teachers' instruction and provided them with professionally enriching experiences.

> *We became a part of this research team to meet the changing needs of our teachers. What we learned helped us to build the media center collections in our schools, communicate with teachers and students, and examine the relationship between our media centers and classrooms libraries. . . . We will continue to seek information that will help us meet the needs of our faculty and students as instruction in our schools continues to evolve.*[25]
>
> —*Lisa James Delgado and Mary Jane Hill, media specialists, on their study of school and classroom libraries*

> *Looking at the data I had collected during the year, I concluded that informal drama promoted many positive qualities within my classroom. . . . Drama encouraged creativity, imagination, and the enjoyment of learning.*[26]
>
> —*Carol Carr Kieffer, fourth-grade teacher, on her study of informal drama and students' literacy and language development*

> *I really enjoy researching my teaching practices to help benefit the students and improve my teaching. I write about my research in the hope that my experiences will be helpful to someone else.*[27]
>
> —*Jennifer White, on her experience exploring home and school connections with families of her kindergarten students*

learning environments for their children and families. Teachers told the story of their journey down the action-research road in their book *Exploring Blue Highways*[24] [see Box 4–4].

The School Research Consortium

[Key Idea] A self-directed community of teacher-researchers can produce powerful, pragmatic, influential inquiry that has local, regional, and national impact on the literacy profession.

Teachers have informed and guided the NRRC since its inception. While writing the proposal for funding, NRRC organizers conducted a national poll asking classroom teachers to identify critical issues and questions they faced as educators.[25] Building on this teacher voice, the NRRC pledged to enlist teachers as collaborative researchers and establish permanent research sites in schools [see Box 1–3].

Box 4–5. The Teacher-Research Story at the University of Georgia School Research Consortium

Betty Shockley Bisplinghoff, an experienced teacher-researcher and Coordinator of the SRC, commented on the nature and impact of SRC teachers' efforts in classroom inquiry.

Stories of teacher research are contributing to a rich and varied legacy of lives and learnings within the context of classrooms. We think such stories help build a tradition among and between teachers that can be resurrected and revised as others engage in similar adventures. Each is a unique take of successes, confusions, and disappointments. Though plotted in different ways, these stories remain true to an emerging genre defined by setting and characters (i.e., classrooms and students). The SRC is a community that not only shared its stories of research with each other, but also with a broader community of educators through both oral and written retellings. The combined stories of the researchers within the SRC tell of a developing methodology that is both varied in adaptations and unified in purpose. By developing and documenting their particular pathways to understanding, these teacher-researchers capture a record of growth and change that too often has been lost to the profession.[26]

In the fall of 1992, an NRRC committee of school and university personnel initiated a process whereby teachers within a 30-mile radius of the University of Georgia were invited to participate in the formation of a teacher-research community. Through a series of meetings at elementary, middle, and high schools, teachers identified questions and concerns critical to them.[27] Later that school year, the School Research Consortium (SRC) at the University of Georgia NRRC site was formed, and teacher-research projects were initiated in the spring and fall of 1993.

The initial SRC community consisted of 34 teacher-researchers located in one high school, two middle schools, and eight elementary schools in four counties surrounding Athens, Georgia. Additionally, four university-based coresearchers participated in the SRC's 17 projects. The number of SRC participants has remained fairly constant, although membership has been fluid, with new researchers joining, others dropping out, and some rejoining after a hiatus of a year or two.

Multiple models of teacher research have been embraced in SRC research,[28] but in all instances, teachers posed the research questions and had primary responsibility for directing the projects.[29] The SRC is governed by a board of teacher-researchers and supported by NRRC facilitators. Although the numbers of SRC participants and school sites have changed over succeeding years, the SRC community remains a thriving, vibrant, productive source of teacher research [see Box 4–5].

Teacher research supported by the SRC has explored an array of educational concerns. It has involved teachers and students from multiple age and grade levels and has employed varied research

methods. The following two examples – one from an elementary school and the other from a high school – represent the diversity in SRC inquiry.

Teacher-researchers discover magic. Ann Keffer, Shelley Carr, Barbara Lanier, Leah Mattison, and Debby Wood, teachers at Comer Elementary School in Madison County, Georgia, were feeling uncomfortable with their writing program as their school made a transition to a whole language orientation. They wished for their students to form communities of writers in their classrooms, but they had no first-hand sense of how to accomplish this:

> We talked glibly about children claiming membership in a community of learners and how much membership provided strong motivation for language acquisition, skills development, and the evolution of attitudes and behaviors that lead to lifelong learning. Yet we had no personal experiences to tell us what factors encouraged or inhibited the formation of such communities in our classrooms.[32]

As a first step, they formed a writing community among themselves and conducted a year-long investigation, which was guided by the question, How does membership in a community of writers affect our perceptions of ourselves as writers and as teachers of writing? Throughout the year, they studied their own development as writers within a community and reflected on implications for initiating writing communities in their classroom. Inviting Randi Stanulis, a university faculty member with similar interests, to join them, the Comer group learned much about the writing process, getting ready to write, integrating literature and writing, giving and receiving feedback, and establishing classroom communities.[33] They also learned about the value and importance of classroom inquiry [see Box 4–6].

[Box 4–6. Trusting Teachers to Become Researchers]

Although guided by the NRRC mission, research in the SRC is determined by teachers themselves. This was contrary to the expectation that the Comer Elementary research team had at the onset of the SRC community:

> *The magic began for us in the spring of 1993 when the NRRC invited our school to become a member of the School Research Consortium. Five teachers from our school attended an organizational meeting for prospective members, where we expected to be paired with university professors and doctoral candidates whose interests matched ours and who already had research projects in mind. It turned out that the NRRC, instead of simply placing ourselves and our students at the disposal of researchers from outside our school, intended for us to become teacher-researchers who would conceive, design, carry out, interpret, and report on our very own project. The NRRC would provide some structure, funding, and consultation, but the projects were ours.*
>
> *We found the prospect of becoming teacher-researchers intriguing but also somewhat daunting. We imagined all research to be a tangle of experimental groups and control groups, double-tailed t-tests and analyses of variance. We doubted our competence and questioned our willingness to commit ourselves to the effort we knew such a project would require. We did, nevertheless, commit ourselves, because we felt it was important for teachers to take advantage of every opportunity to speak and be heard, to develop a voice, and to establish their credibility concerning educational issues.*[33]

A student-centered high school English curriculum. Through the SRC, Patti McWhorter, Barbara Jarrard, Mindi Rhoads, and Buddy Wilcher, English teachers at Cedar Shoals High School in Athens, Georgia, engaged in the study of a student-centered literacy curriculum[34] [see

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Box 4-7]. Growing from her ninth graders' frustrations with the transition from middle to high school, Patti's students initiated a year-long "Life in High School" project. The freshman students wrote scenarios about typical ninth-grade experiences as they adjusted to high school (e.g., frustrations, successes, anxieties, humorous events) for an audience of eighth-grade middle schoolers. These were collected and published in a booklet and presented to the middle schoolers in May of the school year. Patti commented that "as the teacher, my role shifted when we worked on this project. Every aspect of the work – deadlines, topics for scenarios, group organization – was organized with student input and class consensus. The real ownership of the ideas and the learning, consequently, belonged to the students."[18]

Mindi's class of low-achieving seniors also engaged in a self-initiated writing task, but they wrote for class peers in a newspaper titled *The Senior Loudspeaker*. The students wrote a successful grant proposal and then engaged in the full publication process from concept development through drafting, revising, editing, publishing, and distributing their periodical. Mindi noted that "all did not go smoothly, however, especially after the newness and the excitement wore off." But they all persevered, and Mindi "could not believe the end results we were getting. Brief, poorly written articles evolved into longer, more coherent, publishable pieces with input from peer reviewers and me." As Mindi noted, "even at its worst, our project together was more meaningful and successful than any I could have 'imposed' on them."

[Box 4-7. Dance of the Teacher-Researchers]

Patti McWhorter, English teacher and Department Chair, is the leader of the Cedar Shoals High School SRC team. In the following excerpt, Patti described the graceful minuet her team performed as they meet to discuss and analyze data and write from it.

It's a typical research meeting at my house. The substitute's plans are on my desk at school. I've locked up my killer Dachshund, made a pot of coffee, sent my husband and three kids off to work and school, respectively, and cleaned up the den in preparation for Barbara's, Buddy's, and Mindi's arrival. We like to start between 8:30 and 9:00 AM. It feels more relaxed than our typical 8:00 AM school starting time. Buddy brings the bagels.

Over the past couple of years, we developed a simple "research meeting dance" that begins with a slow waltz around the coffee pot, the bagels, and the work from our last meeting. We move languidly through school gossip, slowly gathering energy for the tango to follow. It starts as it always does, with their question to me: "So what are we doing today?"

We dart back and forth, "check-to-cheek," until we come upon a plan. We've got to cut this thing, or no one is going to read it. Here's the plan. We'll each write a few paragraphs about our projects, find points to illustrate our findings (showing, not telling, as we teach our students), and write that elusive introduction. On to the fox trot.

The fox-trot portion of our "research dance" is deliberate and measured, though not as slow as our earlier waltz, or as disjointed as our tango. In this portion of our research meeting "program," we are on-task and productive. We decide to spend a specific length of time completing our writing assignments, usually no more than 2 hours, stopping briefly to share our progress. Mindi works in the kitchen, Buddy and Barbara on the couch in the den. I am on the computer in the den with the large manuscript open and waiting. The chorus line awaits.

We move back together in formation, elated that we have actually produced something worth sharing and made progress on our [writing] obligations to the SRC. . . . You can see those high kicks now as we move to the big finish. The chorus line moves out of the front door of my house. Radio City Music Hall, here we come!!"

Barbara and Buddy also conducted and reported on student-generated projects in their classrooms, efforts that were likewise exciting, unnerving, and productive. In reflecting on their individual projects and collaborative support, sharing, and writing, Patti and colleagues commented on their teacher-research experience:

> As classroom researchers, we feel a heightened sense of security in implementing instructional innovations, because we are thinking more deeply about our practice and documenting our

progress more carefully. Formal and informal conversations about our classrooms remove the sense of isolation with which many teachers are faced. Talking about what we are doing, what we want to try, and how things are going in classrooms is something we need to know. We depend upon the community of learners we have created in our own department and are confident that we can continue our growth.[39]

Learning and Growing by Listening to Others

The NRRC engages teachers' learning and growing by listening to students in classrooms and the broader community of teachers and other literacy educators. The following are brief examples of ways in which various groups inform and guide our knowledge about learning and teaching.

[Box 4–8. Student-Researchers Speak Out]

Penny Oldfather and Sally Thomas have worked with a group of student-researchers from when they were fifth and sixth graders until they were juniors and seniors in high school. While high schoolers, the students explored their own motivation in relation to teachers' actions and attitudes. Throughout the research experience, the student research team remained central in supporting their inquiry and personal learning, as one of the students, Florencia, commented:

> *We were friends in the classroom. We'd speak to each other. [But] when we got together in this group [the research team], it was different. We weren't speaking about the same kinds of things. It was important what we were speaking about. It was something that we all – I wanted to learn about. . . . We're still together, and I'm glad. I don't think we would be as close as we are without the project.*

Another student, Brian, also felt the group affinity and the collective knowledge generated by the research team:

> *The group can learn from one another, and everyone has a different point of view. You're not just learning one person's point of view. . . . If you have a group, one person gives a response and then someone else will think of something else that they haven't said before. Because it's like, it's almost like listening to their own voice say it.*

The students learned and grew through their research, as shown by a third student's, John's, assessment of the high school teachers they had interviewed:

> *Look at the teachers we have. You're always going to have a few troublemakers, but you can't let that stop you. You've got to overcome those hurdles. We have all these great teachers that we're interviewing. All of us have these wonderful teachers at our school.*[45]

Students as Researchers

[Key Idea] **Students serving as researchers or informants provide insightful perspectives within the teacher-research process.**

Penny Oldfather explored students' motivation in a series of NRRC-supported studies.[40] A unique aspect of her line of inquiry was the involvement of students as coresearchers.[41] Penny did the obvious but rare occurrence in educational research: *asking* students directly what makes a difference in their desire to learn and grow as readers, writers, and language users.

Asking students about their schooling and learning grew into an expanded role for them as coinquirers. Beginning when they were fifth and sixth graders, Penny, in collaboration with their classroom teacher, Sally Thomas, involved students in a shared inquiry in which they sought to understand what and how students want to learn.[42] The students' involvement and subsequent insight led Penny to the notion of *honored voice*, the deep responsiveness of Sally's classroom culture to students' literacy and literary expression.[43]

As the student-researchers grew into middle and high schoolers,[44] Penny maintained contact and continued to have them participate in research on motivation for learning [see Box 4–8]. Through students' continued insight, she was able to paint a portrait of classroom conditions and teachers' actions that students reported made a difference in creating an ongoing desire to know and learn. And as Penny noted, the process of shared inquiry itself is motivating for students and promotes their learning:

> Shared inquiry with students does not mean that we relinquish our roles as teachers. Nor does it mean that educational outcomes or curriculum expectations cannot be reached.... The critical difference is in terms of the intrinsic motivation that is activated when students participate with their teachers as educational theorists.[45]

[Box 4–9. Literacy Educators Express Their Opinions]

The NRRC Professional Ways of Knowing mail survey[46] reported 1,500 educators' opinions on a variety of issues, including the following:

- 88% read books about literacy teaching and learning within the past year, and 81% reported that professional reading influenced their beliefs about literacy.
- 42% of the respondents were members of professional literacy organizations (e.g., International Reading Association, National Council of Teachers of English, American Library Association).
- 70% indicated that students' self-initiated independent reading and writing was a very meaningful indicator of motivation for literacy learning.
- 75% were familiar with teacher research, 20% considered themselves to be teacher-researchers, and 48% were interested in becoming teacher-researchers.
- 59% reported using portfolios in classroom assessment, and 82% agreed that portfolios allow teachers to pay attention to process and progress instead of a final outcome; however, 61% did not agree that portfolio assessment should replace more traditional measures of evaluation (e.g., standardized tests and grades).
- 59% agreed that home and school are equally responsible for learning to read and write, although 39% believed that the school has more responsibility than the home.
- 79% supported an eclectic approach to literacy instruction, whereas only 10% supported skills and back-to-basics, and 7% supported whole language beliefs and practices.

The face-to-face interviews revealed a variety of opinions about literacy teaching and learning. One teacher espoused the eclectic perspective for exceptional children.

[continued on the next page]

Research Informed by the Broader Education Community

Just as NRRC researchers respect students' knowledge by involving them in research, so too, NRRC research has explored teachers' and other educators' knowledge and thinking about literacy teaching and learning. For example, Michelle Commeyras, Linda DeGroff, Randi Stanulis, and Karen Hankins formed a Professional Ways of Knowing research team, which asked the question, How do literacy professionals' practices and policies help children become literate?[47] To address this broad question, the researchers conducted a two-phase inquiry. The first was a national mail survey of 1,500 preschool, elementary, middle, and high school teachers; school administrators; reading specialists; library media specialists; and university teacher educators. The second phase was face-to-face interviews of attendees at the annual meetings of the National Council of Teachers of English and the International Reading Association. In both research formats, literacy professionals were queried about a variety of topics

[Box 4–9 continued]

There's so many special education kids that have trouble with reading, and not one approach is going to help them all, and so you keep looking for new ways.

A junior high teacher commented on her growth as the school moved from tracking to heterogeneous grouping:

I was one of the ones who fought it [heterogeneous grouping]. I must admit. I have always enjoyed having the top group, and never really minded the low ones, but I can see that the low ones really are shortchanged when they are all together, and I think if I could mention a change, I would say that I see those lower kids having much better self-esteem.

An elementary teacher described how professional reading and peer observation promoted her growth as a teacher:

I did an awful lot of reading, and I visited classrooms of the teachers that I had seen present workshops on portfolios. I asked if I could come and visit their classrooms and saw how they implemented the portfolios, or I visited a multiage classroom where the teacher had presented at a conference and I just sort of picked and chose things that I thought fit with my style.

such as student motivation, teacher research, portfolio assessment, and families and literacy, resulting in both predictable and surprising findings (see Box 4–9).

Findings from the Professional Ways of Knowing research have the potential to guide teachers, administrators, and policymakers in their decision making about literacy instruction and programs. And, as the research-team authors acknowledged: "Research on literacy professionals' knowledge, beliefs, and actions is ultimately important when it leads to changes in students' learning."[19]

In conclusion, the NRRC has engaged teachers to learn and grow through collaborative inquiry, teacher research, and involving and listening to students and fellow professional educators. This has helped us see and learn first-hand in the home, school, and community environments in which literacy acquisition and teaching occur. This type of research has enhanced our understanding of real-world issues and allowed the voices of those most affected by reading and literacy education policies to participate in the growing research literature. The following comment by Debby Wood on her experience as a research participant exemplifies the pragmatic but always theoretically practical research supported by the NRRC:

> Part of the story, too, is of our growing understanding of our roles as teacher-researchers. After 2 years, we know that classroom research is not something one gets through with. Instead, it is a different approach to teaching in which theory informs practice and *practice informs theory* continually and immediately right in the classroom.[20]

ChapterFive

An Engaging Future

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A primary task for the NRRC was to produce research with clear links to the worlds of students, teachers, and classrooms. From its inception, the NRRC has considered the relationship of research and practice as symbiotic: Research should inform practice, and practice should inform research.[1]

These words from the introduction to *Developing Engaged Readers in Home and School Communities*, a book reporting NRRC-sponsored research, express a fundamental principle that has guided our inquiry: Research ultimately has to make a difference for students, teachers, and families. Further, we believe that there ought to be a synergistic relationship between research and the work of teachers, each guiding and informing the other. In this final chapter, we recount where our research has taken us and look toward the future of reading research.

Where Have We Been?

Over the 5-year lifespan of the NRRC, substantial amounts of federal funds, distributed through the U.S. Department of Education's Office of Educational Research and Improvement, were expended to conduct NRRC research. Approximately 100 NRRC researchers have conducted 130 studies, resulting in over 140 official Research Reports, Instructional Resources, and Perspectives in Reading Research produced in print, electronic, and video media. Additionally, our research has been reported at numerous professional meetings, has appeared in scores of newspaper and journal columns, and has been published in hundreds of books and professional periodicals.[2]

NRRC research has focused on understanding and improving the acquisition of reading abilities of preschoolers through 12th graders. The engagement perspective – which describes readers who are motivated, strategic, knowledgeable, and socially interactive – has guided our research agenda. We have conducted research in the environments in which literacy learning and teaching occur, including children's and adolescents' homes; elementary, middle, and high schools; and other environments such as community centers and preschools.

Our research is diverse in many ways. The teachers and students who have been participants in our studies span the United States, from New Jersey to Texas and California, from Georgia to Washington state. Research sites have included inner-city Atlanta, rural communities in Maryland, medium-sized towns in Indiana and New Jersey, and suburban San Francisco and Houston. Our research

populations are likewise diverse, including multicultural preservice and inservice teachers in San Diego, predominantly low-income African American children and families in downtown Baltimore, teachers and students from middle-class schools in Austin, Texas, and low-income White families in rural Georgia.

Our research orientations also have varied. We have conducted experimental studies in classrooms, engaged in descriptive studies of children at home and in school, conducted case studies of individual children in schools, examined teachers' and students' growth in school reform programs, and explored teachers' professional growth within a research community.

We have designed our research to bridge the theory and practice dichotomy that so often limits educational research. In other words, although our research has been theory driven, it was not divorced from the real-life situations of children, homes, parents, teachers, and schools. Although diverse with respect to location, participants, research perspective, and tools, our studies have been unified in that we started from and returned to the notion of reading engagement. And we always return to a fundamental question: How can our research help teachers to support children's and adolescents' reading growth and development so that children and their families possess the power literacy provides for social access, economic opportunity, and personal fulfillment?

Preschool and Elementary Reading Education

A cornerstone of the engagement perspective is motivation, and NRRC researchers have explored young children's motivations for literacy in multiple ways. Conceptual work on issues related to and facets of motivated literacy use has been conducted,[1] and insight into motivation has been gleaned by inviting perspectives from those most intimately involved with teaching and learning: students and teachers.[2] NRRC investigators have examined students' motivation in the acts of learning ideas and concepts from texts within content areas[3] and while being engaged in literary experiences.[4] We also have learned much about processes and methods for informally and formally assessing student motivation for literacy and learning.[5] There are many implications of our work. At one level, we have a better theoretical understanding of the intricacies of student motivation and what does and does not encourage children to learn and use literacy skills. On another level, we have a clearer picture of what teachers might do to invite and encourage children to select and read a book for pleasure, to write a letter or note for functional purposes, to provide an oral or written response to a piece of literature, or to persist in a learning or literacy task even when it is frustrating or difficult.

Literacy learning occurs not only at school but also in the home and across the community.[6] Our research has reaffirmed the importance of rich preschool home environments in promoting children's growth in language, reading, and writing.[7] We have also relearned that the stereotypes are wrong: race, economics, and culture are inaccurate when it comes to predicting which families support their

children's literacy development.[10] Values for literacy, which can be manifested in multiple ways, are the common feature, not a family's sociocultural history. Researchers have shown ways in which parents can be invited to participate in school activities and how teachers can connect home literacy events to those at school.[11] The implications of our work on home-school connections are political and pragmatic. Our research is political in that it challenges the notion of "disadvantaged" or "at risk" children and families.[12] Instead, we think in terms of "children of promise,"[13] whose families provide conventional and unconventional support systems for creating literacy values and developing literacy skills. It is pragmatic in that it helps educators recognize and fight the stereotype of "low-income, minority child and family," instead showing teachers how to work with children and families to support and enhance the literacy of children and families.[14]

A major theme in our research in elementary reading environments has been to explore how to capitalize on the power and captivation of children's literature when teaching children reading skills and strategies. Various NRRC studies have demonstrated that children can learn to pronounce words, expand their vocabularies, and acquire sophisticated comprehension strategies when teachers provide carefully and sensitively crafted instruction that draws from quality literature.[15] Further, our research demonstrates that such skill development is not at the expense of children's enjoyment and appreciation of literature. In fact, students become more knowledgeable, motivated, and appreciative of books and literature *because* they have keys to unlock the wondrous texts available to them.[16] We have also found that the strategy and literature connection is just as robust for diverse populations of students and for struggling readers as it is for mainstream or higher achieving students.[17] Through our work, teachers have access to various models for teaching children to develop into skillful readers within a literature-based environment that will both whet their literary interest and enable them to acquire a thirst for reading and learning.

Secondary-School Reading Education

NRRC researchers have spent considerable time in middle schools and high schools, observing students, working with teachers, and learning about the intricacies of helping adolescents and young adults use literacy for learning and personal fulfillment. Studies have explored ways in which content in history and science texts can be presented and learned in more effective and efficient ways. Other research has explored the power of talk among students and teachers to promote understanding of texts.

NRRC studies have provided teachers insight into the use of multiple texts for learning content in history. Researchers in middle school and high school classrooms found that presenting information in multiple, original-source documents had a number of positive effects. When students had control and choice in what they read in social studies, they were more engaged with the topic and became invested in learning.[18] Likewise, researchers found that multiple texts used in high school social studies

classes helped students to begin to "think like historians."[19] This collection of studies documents how teachers can employ a variety of textual sources for teaching content subjects, either as a complement to the traditional textbook or perhaps in lieu of it.

NRRC researchers have explored science learning in secondary classrooms, focusing on how analogical thinking might enhance the learning of complex concepts.[20] These studies have shown that linking new knowledge (e.g., cell structure) to familiar ideas (e.g., a factory) helped students develop understanding of new scientific ideas. Other studies have documented that scientific concepts that challenge intuition (e.g., gravitational forces) can be impediments to students' learning.[21] As a result of these lines of inquiry, we have uncovered concrete ways to help teachers structure lessons in science using analogies,[22] how textbooks and other materials might be modified to incorporate analogical thinking,[23] and how teachers might help students acquire an understanding of counterintuitive science concepts through a multifaceted program of reading, discussing, and laboratory learning.[24]

NRRC researchers were aware of the value and power of classroom discussions as teaching and learning tools, and a number of studies expanded our knowledge of this domain. By examining students' perceptions of peer-led discussion groups, researchers obtained insight into the subtleties of students' talk and the benefits and possible limitations of this structure.[25] In other research, we learned that cross-grade discussion partners provided young students valuable, credible advice for reading trade books and helped adolescent partners acquire insight into their own reading and thinking.[26] Other studies explored how texts that evoked gendered talk led secondary students and their teachers to reflect on and challenge gender-based stereotypes.[27] These diverse studies on discussion document the power of talk as a learning tool and the thought and care that must be taken when using discussion in classrooms.

Teachers' Professional Growth and Understanding

Our assertion that research and theory are symbiotic and synergic is based largely on the manner in which we have conceptualized and implemented the research process. As described in Chapter 4, research has not been done onto teachers or bestowed upon them from the university. Rather, teachers have been full participants in the planning, doing, and interpreting of NRRC studies. As a result, our research has been honest and useful to teachers. And the process of teachers as researchers – coinquirers with university researchers or independent investigators themselves – has added credibility to our work and enhanced the acceptance of our studies.

For example, we see teacher book clubs being initiated within many school faculties[28]; there has been much interest in the Concept-Oriented Reading Instruction (CORI) program of integrating literacy and content instruction[29]; teachers have made many requests for information about our research on classroom discussions about texts at the elementary[30] and secondary levels[31]; and the collaborative

research involving preservice secondary English-Education teacher candidates, high school supervising teachers, and university faculty has been viewed as believable and useful.[32] NRRC collaborative research has been viewed as valuable and helpful to teachers and other educators, because teachers' voices are present in the research process from the conceptualization of a study to the dissemination of its findings.[33]

The School Research Consortium (SRC) has been another important mechanism for producing and sharing pragmatic classroom research. The NRRC did not invent the notion of action research, nor did it establish the first teacher research community,[34] but the SRC has been a visible and influential means to promote classroom inquiry and showcase the power of teachers examining their own practices. Books such as *Engaging Families* and *Exploring Blue Highways*, as well as articles in widely read periodicals such as *The Reading Teacher, Language Arts,* and *Learning,*[35] present teacher initiated and conducted NRRC research that is being read and utilized by many thousands of educators.

The inclusion of students as researchers and informants[36] has also expanded our conceptualization of the research process. By inviting those on the inside of schools and classrooms to offer their views, we come to a deeper understanding and broader perspective about what constitutes effective classroom literacy programs. Likewise, by asking for the opinion of teachers regarding their practices and perspectives about quality literacy instruction[37] and their own professional growth and development,[38] we complement what we learn through direct classroom inquiry and observation.

Given our value for diversity in the NRRC, we accept that we learn about reading and literacy from educational research that embraces various philosophical perspectives and orientations.[39] Collaborative research involving teachers has proved to be one viable and important form of inquiry for expanding our understanding of the teaching and learning of literacy.

What Does the Future Hold?

What does 5 years' worth of reading research tell us about tomorrow? In other words, what does the future hold for reading research and instruction? To address these vexing questions, we provide the following words:

> Change during the present century has been most exciting. For one thing, interest in reading instruction became practically universal during this era. There was a time when primary teachers were the only people interested in the teaching of reading. Now teachers of all subjects and at all levels are teaching reading and seeking information about reading. Parents are asking questions, pursuing books and articles on reading. Students at high school and college levels and adults beyond college are flocking to reading centers. Slick magazines and laymen

> are discussing reading freely. Perhaps, most important of all, governmental agencies are deeply concerned with reading improvement both in school and out. Not only is the government encouraging the improvement of reading instruction and the wide-spread teaching of reading, but it is offering financial assistance in furthering both of these objectives. A great conflagration of interest has been ignited amongst teachers and students, the lay public, and the government. This is a most auspicious occurrence.

Are these words from some recent U.S. Department of Education bulletin or report? Is this some contemporary, self-congratulatory rhetoric from the literacy educational research community, perhaps through a professional organization? Or is this a recent summative statement from the Office of Educational Research and Improvement, the NRRC's sponsoring agency, justifying its mission and existence?

No, these are the words of Nila Banton Smith from *American Reading Instruction*, originally written in 1934 and updated in 1965.[6] Smith's conclusion to her classic rendering of the ebb and flow of curricular and instructional practices in U.S. literacy education over nearly 400 years has for us an almost eerie applicability today. Interest in students' reading ability is perhaps at an all-time high. We find teachers across grade and age levels not only demonstrating an interest in their students' literacy abilities, but also assuming responsibility for their growth. Parents, politicians, and policymakers are justifiably concerned with accountability of U.S. students' literacy growth in schools, and funding for literacy research is still within the federal agenda. In short, literacy learning today remains a critical priority among educators, parents, and the general public, just as it was when Smith described reading instruction in America decades ago.

Only time will tell what the NRRC legacy will be, but we believe that the initiatives pursued over the past 5 years have enhanced understanding of the learning and teaching processes involved with literacy acquisition in home, school, and community environments. We look forward to subsequent research efforts to build upon and extend the work that we have begun.

Notes

Abbreviations

In citing works from the NRRC in the notes, abbreviations have been used for titles of series as follows:

RR Reading Research Reports. Athens, GA: NRRC.
IR Instructional Resources. Athens, GA: NRRC.
PR Perspectives in Reading Research. Athens, GA: NRRC.

Chapter One

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